ORDER NO. AD9002023C8

Service Manual

Cassette Deck
RS-X101

Dolby NR-Equipped
Stereo Double Cassette Deck

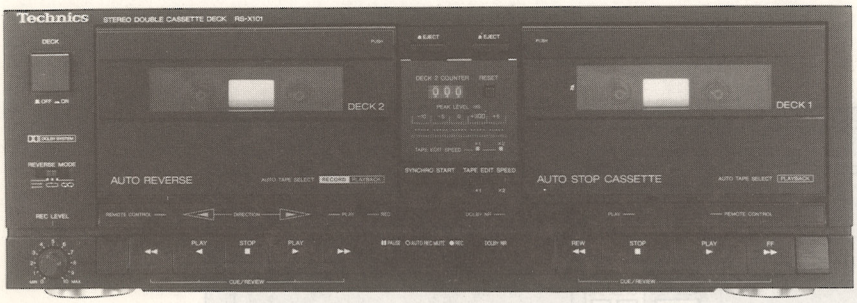
Color

(K)... Black Type

Area

Country Code	Area	Color
(E)	Continental Europe.	(K)
(EB)	Great Britain.	(K)
(EG)	F.R. Germany and Italy.	(K)
(GC)	Third Region.	(K)
(GN)	Oceania.	(K)

* DOLBY SYSTEM



RS-X911 MECHANISM SERIES (AR300)

SPECIFICATIONS

■ CASSETTE DECK SECTION

Deck system	Stereo cassette deck
Track system	4-track, 2-channel
Heads	
(tape deck 2) Rec/play	Permalloy head
Erasing	Double-gap ferrite head
(tape deck 1) play	Permalloy head
Motors	
(tape deck 2) Capstan/reel table drive	DC servo motor
(tape deck 1) Capstan/reel table drive	DC servo motor
Recording system	AC bias
Bias frequency	80 kHz
Erasing system	AC erase
Tape speeds	4.8 cm/sec. (1-7/8 ips)
Frequency response (w/o Dolby NR)	
NORMAL	30 Hz~16 kHz 40 Hz~15 kHz (DIN)
CrO_2	30 Hz~16 kHz 40 Hz~15 kHz (DIN)
METAL	30 Hz~18 kHz 40 Hz~17 kHz (DIN)
S/N (signal level = max recording level, CrO_2 type tape)	
Dolby B NR on	66 dB (CCIR)
Dolby NR off	56 dB (A weighted)
Wow and flutter	0.1 % (WRMS)
Fast forward and rewind times	Approx. 110 seconds with C-60 cassette tape
Input sensitivity and impedance	
LINE	60 mV/47 kΩ
Output voltage and impedance	
LINE	400 mV/800 Ω

■ GENERAL

Power consumption	15 W
Power supply [(EG) area only]	AC 50/60 Hz 220 V
Dimensions (W × H × D)	360 × 129 × 285 mm (14-3/16″ × 5-3/32″ × 11-7/32″)
Weight	
For [EG] area	4.0 kg (8.8 lb.)
For others	3.5 kg (7.7 lb.)

Note:

Specifications are subject to change without notice.
Weight and dimensions are approximate.

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

Technics

Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan

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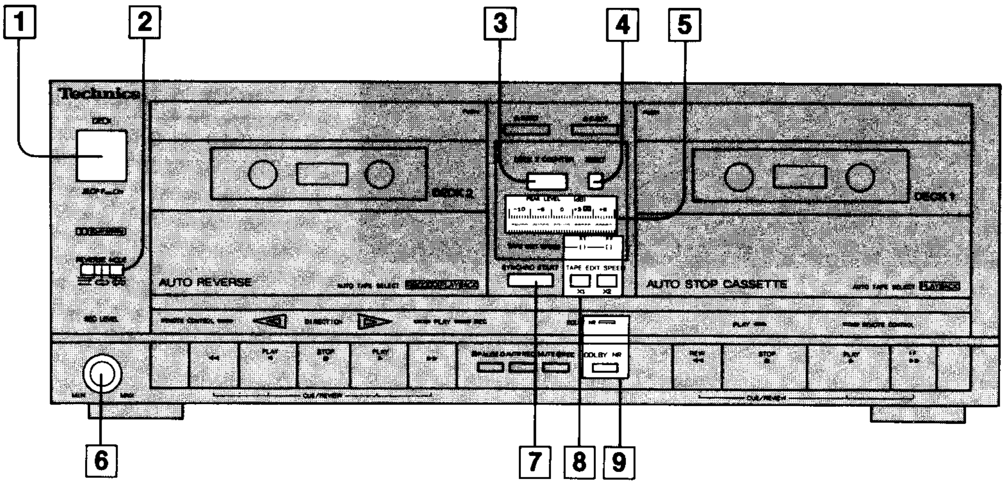
■ LOCATION OF CONTROLS



Controls common to both tape decks

1 Power on/standby switch (POWER)...For (EG) area only. DECK ON/OFF switch (DECK)...For others.

2 Reverse-mode selector (REVERSE MODE)

This selector can be used for selection of the reverse mode (for either playback or recording).

3 Tape counter (DECK 2 COUNTER)

Indicates the amount of tape movement.

4 Tape counter reset button (RESET)

This button can be used to reset the tape counter indication to "000".

5 Input level meter (PEAK LEVEL)

During playback, this meter indicates the level of the recorded sound source.
During recording, it indicates the level being recorded, adjusted by the recording-level controls.

6 Recording-level control (REC LEVEL)

This control can be used to regulate the recording level of tape deck 2.

7 Synchro-start button (SYNCHRO START)

This button can be used to start a tape-to-tape recording, simultaneously starting tape deck 1 (the playback deck) and tape deck 2 (the recording deck).

8 Edit-recording tape-speed buttons/indicators (TAPE EDIT SPEED)

These buttons can be used to select the recording speed when a tape-to-tape recording is made.

9 Dolby noise-reduction button/indicator (DOLBY NR)

This button is used to reduce the "hissing" noise heard from the tape.

ORDER NO. AD9002027C8

Cassette Deck

RS-X101
RS-X301
RS-TR265

DEUTSCH

MESSUNGEN UND EINSTELL METHODEN

Meßinstrumente

- Elektronisches Voltmeter (EVM)
- Oszilloskop
- Digitaler Frequenzmesser
- Audiofrequenz-Oszillator
- Dämpfungswiderstand
- Gleichstrom-Voltmeter
- Widerstand (600Ω)

Tonkopf-Azimuteinstellung (Deck 2/1)

1. Spielen Sie auf dem Testband (QZZCFM) den Teil für die Azimuteinstellung (8kHz, −20dB) ab. Drehen Sie die Azimuteinstellschraube so lange, bis die Abgaben des L-K und R-K den Höchstwert erreichen, und die Lissajosscghe wellenfigur sich, wie abgebildet, 0 Grad nähert.

Anmerkung:

When L-K und R-K nicht auf demselben Punkt ihren Höchstwert erreichen, stellen Sie beide Kanäle auf den jeweiligen Höchstwert und gleichen dann aus.

2. Nehmen Sie denselben Einstellvorgang in der Wiedergabestellung vor.

Prüfung des Pegelunterschiedes bei Vorwärts- und Rückwärtsdrehung

3. Den Abschnitt für Verstärkungseinstellung (315Hz, 0dB) des Prüfbandes (QZZCFM) wiedergeben und sicherstellen, daß der Pegelunterschied bei Vorwärts- und Rückwärtsdrehung kleiner als 1dB ist.
4. Nach der Einstellung Schrauben-Sicherungsmittel an die Azimuth-Einstellschraube geben.

Bandgeschwindigkeits-einstellung (Deck 2/1)

Normale Geschwindigkeit

1. Den Wahlschalter für Editier-Bandgeschwindigkeit auf "x1" stellen.
2. Den mittleren Teil des Prüfbandes (QZZCWAT) wiedergeben.
3. Deck 1 = **VR902** und Deck 2=**VR903** so einstellen, daß

Hohe Geschwindigketi

4. Den Wahlschalter für Editier-Bandgeschwindigkeit auf "**x2**" stellen und den Prüfmoduspunkt und GND verbinden.
5. Den mittleren Teil des Prüfbandes (QZZCWAT) wiedergeben.
6. Deck 1 = **VR901** so einstellen, daß der Ausgang dem Sollwert entspricht.

Einstellung der Wiedergabeverstärkungsregelung (Deck 2/1)

1. Spielen Sie auf dem Testband (QZZCFM) den Teil für die Einstellung der Verstärkungsregelung (315Hz, 0dB) ab.
2. Stellen Sie **VR3** (L-K) [[**VR4** (R-K)]] für Deck 1 und **VR5** (L-K) [[**VR6** (R-K)]] für Deck 2 so ein, daß die Abgabe den Normwert erfüllt.

Wiedergabefrequenzaang (Deck 2/1)

1. Spielen Sie auf dem Testband (QZZCFM) den Teil für den Frequenzgang (315Hz, 12,5kHz~63Hz, −20dB) ab.
2. Achten Sie darauf, daß der Frequenzgang für beide Kanäle (L-K, R-K) in dem in **Abb. 6** gezeigten Bereich liegt.

Löschstromeinstellung (Deck 2)

1. Die leere Metallband-Prüfkassette (QZZCRZ) einsetzen und das Gerät auf Aufnahmepause schalten.
2. **VR301** so einstellen, daß der Ausgang zwischen **TP3** und GND dem Sollwert entspricht.

Gesamtfrequenzgang (Deck 2)

1. Legen Sie das normale Leertestband (QZZCRA) ein und stellen das Gerät auf Aufnahme-/Pause-Betrieb.
2. Geben Sie über einen Lautstärkeregler ein Bezugseingabesignal (1kHz, −24dB) ein.
3. Stellen Sie das Signal auf 20dB und justieren die Frequenz von 50Hz~10kHz.
4. Nehmen Sie das Wobbelsignal auf.
5. Geben Sie das aufgenommene Signal wieder und achten darauf, daß dieses sich im Vergleich zur Bazugsfrequenz (1kHz) in dem in **Abb. 8** aufgezeichneten Bereich befindet.
6. Sollte das Signal nicht im Normbereich liegen, justieren Sie **VR303** (L-K) und **VR302** (R-K), so daß der Frequenzpegel mit der Norm übereinstimmt.
7. Wiederholen Sie die Schritte 2~6 und verwender das CrO_2 Band (QZZCRX) und das Metallband (QZZCRZ). Der Frequenzbereich wird auf 12.5kHz (50Hz~12.5kHz) angehoben.
8. Achten Sie darauf, daß sich der Frequenzpegel in dem in **Abb. 9** aufgezeigten Bereich befindet.

Einstellung der Gesamtverstärkungsregelung (Deck 2)

1. Legen Sie das normale Leertestband (QZZCRA) ein und stellen das Gerät auf Aufnahme-/Betrieb.
2. Legen Sie ein Bezugseingabesignal (1kHz, −24dB) an. Stellen Sie das Ausgangssignal auf einen Pegel von 0.4V ein.
3. Nehmen Sie das Eingabesignal auf.
4. Geben Sie das in Schritt 3 oben aufgenommene Signal wieder und achten Sie darauf, daß das Ausgangssignal mit dem Normwert übereinstimmt.
5. Sollte der Wert nicht innerhalb der Norm liegen, justieren Sie **VR7** (L-K) und **VR8** (R-K).
6. Wiederholen Sie die Schritte 2~5 von oben so lange, bis das Ausgangssignal im Normbereich liegt.

FRANÇAIS

METHODES DES MEASURES ET REGLAGES

Appareils de mesurage

- Voltmètre électronique
- Oscilloscope
- Compteur de fréquence numérique
- Oscillateur de fréquence audio
- A.T.T. (Atténuateur)
- Voltmètre à C.C.
- Résistance (600Ω)

Reglage Azimutal de la tete (Platine 2/1)

1. Faire jouer la portion du réglage de l'azimuth (8kHz, −20dB) de la bande d'essai (QZZCFM). Ajuster la vis de la mise au point azimutale jusqu'à de que les sorties du canal de gauche et du canal de droite soient maximisées et que la forme d'onde de Lissajous, comme il est illustré, approche de 0 degré.

Nota:

Si le canal de gauche et canal de droite ne sont pas maximisés au même point, régler le point où les niveaux de chaque canal sont maximiséset égaux.

2. Effectuer le même r&e 19 mglage sur le mode d'audition.

Vérification de la différence de niveau pour les deux sens de rotation

3. Introduire une bande métal vierge prévue pour les essais (QZZCPZ) et vérifier que la différence de niveau pour lés déux sens de rotation est inférieure à 1dB.
4. Après cela, mettre une goutte de vernis de blocage sur la vis de réglage de l'azimut.

Réglage de la vitesse de défilement Vitesse (Platine 2/1)

normal

1. Placer le sélecteur de vitesse d'édition sur la position "x1".
2. Lire la partie centrale de la bande d'essai (QZZCWAT).
3. Régler **VR902** pour la platine 1 et **VR901** pour la platine 2 de manière que la sortie ait la valeur standard.

Grande vitesse

4. Placer le sélecteur de vitesse d'édition sur la position "x2" et relier le point de test et la masse (GND).
5. Lire la partie centrale de la band d'essai (QZZCWAT).
6. Régler **VR901** pour la platine 1 de manière que la sortie ait la valeur standard.

Reglage de L'amplification de Lecture (Platine 2/1)

1. Faire jouer la partie réglée de l'amplification (315Hz, 0dB) de la bande d'essai (QZZCFM).
2. Régler la platine 1: **VR3** (canal de gauche) [[**VR4** (canal de droite)]] et la platine 2: **VR5** (canal de gauche) [[**VR6** (canal de droite)]] de telle sorte que la sortie soit en deçà de la valeur standard.

Reponse en Frequence de la Lecture (platine 2/1)

1. Faier jouer la partie de la réponse en fréquence (315Hz, 12.5kHz, −63Hz, −20dB) de la bande d'essai (QZZCFM).
2. S'assurer que la réponse en fréquence soit en deçà de la plage montrée dans la **Fig. 6**, à la fois pour le canal de gauche et le canal de droite.

Réglage du courant d'effacement (Platine 2)

1. Introduire une bande métal vierge prévue pour les essais (QZZCRZ) et régler l'appareil en mode de pause d'enregistrement.
2. Régler **VR301** de manière que la sortie entre **TP3** et GND ait la valeur standard.

Reponse en Frequence Totale (Platine 2)

1. Introduire la bande d'essai vierge normale (QZZCRA) et régler l'appareil sur le mode d'intermission d'un disque.
2. Appliquer un signal d'entrée de référence (1kHz, −24dB) par l'intermédiaire d'un atténuateur.
3. Diminuer le signal de 20dB et régler la fréquence de 50Hz~10kHz.
4. Enregistrer le balayage de fréquence.
5. Faire jouer le signal enregistré et s'assurer qu'il soit en deçà de la plage montrée à la **Fig. 8** en comparaison à la fréquence de référence (1kHz).
6. S'Il n'est pas en deçá de la plage standard, régler **VR303** (canal de gquche) et **VR302** (canal de droite) de telle sorte que le niveau de fréquence soit en deçá de la plage standard.
7. Répéter les étapes 2~6 ci-dessus en utilisant la band CrO_2 (QZZCRX) et la bande métallisée (QZZCRX) en augmentant la plage de fréquence à 12.5kHz (50Hz~12.5kHz).
8. S'assurer que le niveau soit en deçà de la plage montrée à la **Fig. 9**.

Reglage de L'amplification Totale (Platine 2)

1. Introduire la bande d'essai vierge normale (QZZCRA) et régler l'appareil sur le mode d'intermission d'un disque.
2. Appliquer un signal d'entrée de référence (1kHz, −24dB). Diminuer la sortie de telle sorte que son niveau devienne de 0.4V.
3. Enregistrer ce signal d'entrée.
4. Faire jouer le signal enregistré à l'étape 3 ci-dessus, et s'assurer que la sortie en deçà de la valeur standard.
5. Si elle n'est pas en deçà de la valeur standard, régler **VR7** (canal de gauche) et **VR8** (canal de droite).
6. Répéter les étapes 2~5 ci-dessus jusqu'à ce que la sortie soit en deçà de la valeur standard.

ESPAÑOL

METODOS DE AJUSTE Y MEDIDA

Instrumento de medición

- EVM (Voltimetro electrónico)
- Osciloscopio
- Frecuencimetro digital
- Oscilador AF
- ATT (Atenuador)
- Voltimetro CC
- Resistor (600Ω)

Ajuste Azimutal de Cabeza (Platina 2/1)

1. Reproducir la porción de ajuste azimutal (8kHz, −20dB) de la cinta de prueba (QZZCFM). Variar el tornillo de ajuste azimutal hasta que las salidas del CH-I y CH-D se maximicen y forma de onda de lissajous, como ilustrado, se acerque a grado 0.

Nota:

Si CH-I y CH-D no son maximizados en el mismo punto, ajustar al punto donde los niveles de cada canal sean maximizados e igualados.

2. Efectuar el mismo ajuste en la modalidad de reproducción.

Comprobación de la diferencia de nivel de giro hacia adelante y hacia atrás

3. Reproduzca la parte del adjuste de ganancia (315Hz, 0dB) de la cinta de prueba (QZZCFM) y luego asegúrese de que la diferencia de nivel de giro hacia adelante y hacia atrás sea menor que 1dB.
4. Después del ajuste, aplique pintura de fijación al tornillo de ajuste del azimut.

Ajuste de la Velocidad de la Cinta (Platina 2/1)

Velocidad normal

1. Lleve a "x1" el selector de la velocidad de la cinta de edición.
2. Reproduzca la sección central de la cinta de prueba (QZZCWAT).
3. Ajuste la platina 1 = **VR902** y la platina 2 = **VR903** de modo que la salida quede comprendida dentro de los valores estándares.

Alta velocidad

4. Lleve a "**x2**" el selector de la velocidad de la cinta de edición y conecte GND y el punto de la modalidad de prueba.
5. Reproduzca la sección central de la cinta de prueba (QZZCWAT).
6. Ajuste la platina 1 = **VR901** de modo que la salida quede comprendida dentro de los valores estándares.

Ajuste de Ganancia de Reproduccion (Platina 2/1)

1. Reproducir la porción ajustada de ganancia (315Hz, 0dB) de la cinta de prueba (QZZCFM).
2. Ajustar la Platina 1: **VR3** (CH-I) [[**VR4** (CH-D)]] y la Platina 2: **VR5** (CH-I) [[**VR6** (CH-D]] de manera que la salida esté dentro del valor estándar.

Respuesta de Frecuencia de Reproduccion (Platina 2/1)

1. Reproducir la parte de respuesta de frecuencia de reproducción (315Hz, 12.5kHz~63Hz, −20dB) de la cinta de prueba (QZZCFM).
2. Asegurarse de que la respuesta de frecuencia esté dentro de la gama mostrada en la **Fig. 6** para ambos CH-I y CH-D.

Ajuste de la Corriente de Borrado (Platina 2)

1. Inserte la cinta de prueba metálica en blanco (QZZCRZ) y ponga el aparato en la modalidad de pausa de grabación.
2. Regule **VR301** de modo que la salida entre **TP3** y GND esté dento de los valores estándares.

Respuesta de Frecuencia Total (Platina 2)

1. Poner una cinta virgen normal (QZZCRA) y poner la unidad en la modalidad de Pausa de Grabación.
2. Aplicar la señal de entrada de referencia (1kHz, −24dB) a través de un atenuador.
3. Atenuar la señal por 20dB y ajustar la frecuencia de 50Hz~10kHz.
4. Grabar el barrido de frecuencia.
5. Reproducir la señal grabada y asegurarse de que esté dentro de la gama mostrada en la **Fig. 8** en comparación con la frecuencia de referencia (1kHz).
6. Si no está dentro de la gama de frecuencia, ajustar **VR303** (CH-I) y **VR302** (CH-D) de manera que el nivel de frecuencia esté dentro de la gama estándar.
7. Repetir los pasos 2~6 de arriba utilizando la cinta CrO_2 (QZZCRX) y la cinta metálica (QZZCRZ) incrementando la gama de frecuencia a 12.5kHz (50Hz~12.5kHz).
8. Asegurarse de que el nivel est&e 19mdentro de la gama mostrada en la **Fig. 9**.

Ajuste de Ganancia Total (Platina 2)

1. Insertar la cinta de prueba en blance normal (QZZCRA) y poner la unidad en modalidad de pausa de Grabación.
2. Aplicar la señal de entrada de referencia (1kHz, −24dB). Atenuar la salida de manera que su nivel se haga 0.4V.
3. Grabar la señal de entrada.
4. Reproducir la señal grabada en el paso 3 de arriba y asegurarse de que la salide esté dentro del valor estándar.
5. Si no está dentro del valor estándar, ajustar **VR7** (CH-I) y **VR8** (CH-D).
6. Repetir el paso 2~5 de arriba hasta que la salida esté dentro del valor estándar.

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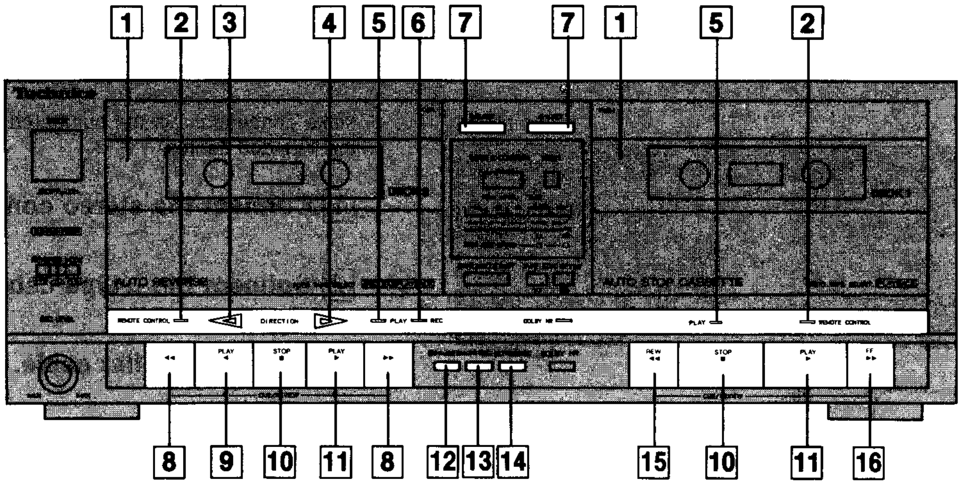


Controls applicable to tape deck 1 and/or 2

1 Cassette holder

2 Remote-control indicator (REMOTE CONTROL)

This indicator illuminates to indicate that this tape deck can now be controlled by the remote-control transmitter.

3 Reverse-side indicator (◀)

This indicator illuminates, during playback or recording on tape deck 2, to indicate that side "B" of the tape is being used.

4 Forward-side indicator (▶)

This indicator illuminates, during playback or recording on tape deck 2, to indicate that side "A" of the tape is being used.

5 Playback indicator (PLAY)

When this indicator illuminates steadily, it indicates that this tape deck is in the playback mode or the recording mode (for tape deck 2 only).
When it flashes continually, this is an indication that tape deck 2 is in the pause mode or the recording stand-by mode.

6 Recording indicator (REC)

This indicator illuminates to indicate that tape deck 2 is in the recording stand-by mode or is recording.

7 Eject button (▲ EJECT)

This button can be used to open the cassette holder.

8 Fast-forward/cue, rewind/review buttons (◀◀/▶▶)

These buttons are used to advance or rewind the tape. During playback these buttons are used to cue or review while listening to the contents at high speed.

9 Reverse-side playback button (◀/PLAY)

This button can be used to start the playback or recording (of deck 2 only) of side "B" of the cassette in this tape deck. (The tape will then begin moving in the right-to-left direction.)

10 Stop button (■/STOP)

This button can be used to stop tape movement.

11 Forward-side playback button (▶/PLAY)

This button can be used to start the playback or recording (of tape deck 2 only) of side "A" of the cassette in this tape deck.
(The tape will then begin moving in the left-to-right direction.)

12 Pause button (❚❚ PAUSE)

This button can be used to temporarily stop the tape playback or recording, on tape deck 2 only.

13 Automatic-record-muting button (○ AUTO REC MUTE)

This button can be used to make (during recording) a silent interval on the tape, on tape deck 2 only.

14 Record button (● REC)

This button can be used to change tape deck 2 to the recording stand-by mode.

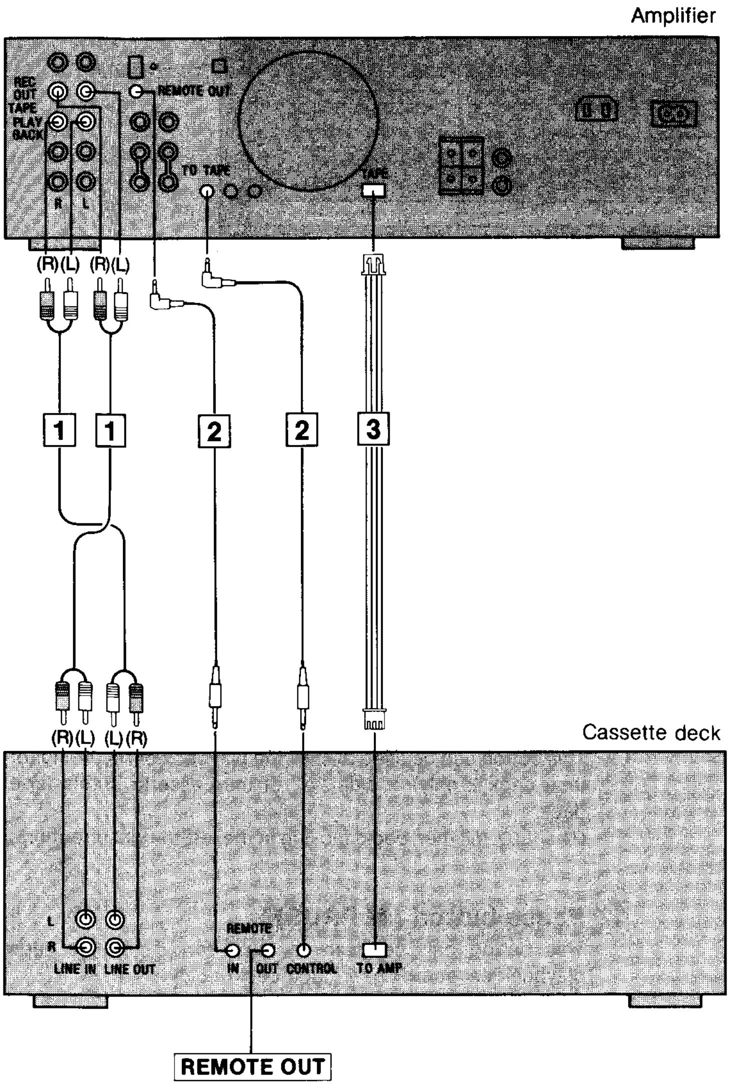
15 Rewind/review button (REW/◀◀)

This button is used to rewind the tape. During playback this button is used to review the contents at high speed.

16 Fast-forward/cue button (FF/▶▶)

This button is used to advance the tape. During playback this button is used to cue the contents at high speed.

HOW TO CONNECTION


Amplifier
REC OUT
TAPE PLAY BACK
R
L
REMOTE OUT
TO TAPE
TAPE
(R)(L) (R)(L)
1
1
2
2
3
(R)(L) (L)(R)
Cassette deck
L
R
LINE IN
LINE OUT
REMOTE
IN
OUT
CONTROL
TO AMP
REMOTE OUT

Make connections in the numbered sequence by using the included cables.

1 Connect the stereo connection cables.

2 Connect the L-type cables.

3 Connect the flat cable.

REMOTE OUT

Connect the L-type cable (not included) to the "REMOTE INPUT" terminal of the graphic equalizer.

Note:
If the unit is not to be connected with the graphic equalizer, connect the L-type cable (included with the compact disc player) to the "REMOTE IN" terminal of the compact disc player.

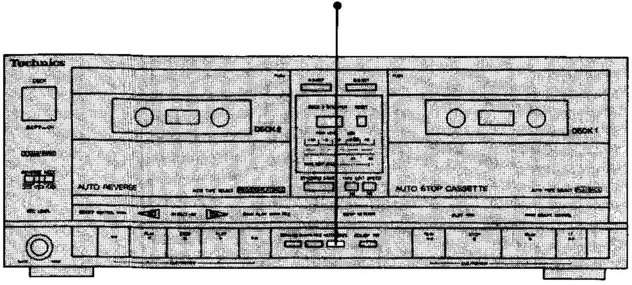
ACCESSORIES

- Stereo connection cables........... 2
  (SJP2249-3)
- L-type cables....................... 2
  (SJP2257T)
- AC power supply cord (polarized).... 1
  (SFDAC05E03: (EG))
- Flat cable......................... 1
  (REX0036: (E, EB, GC, GN))

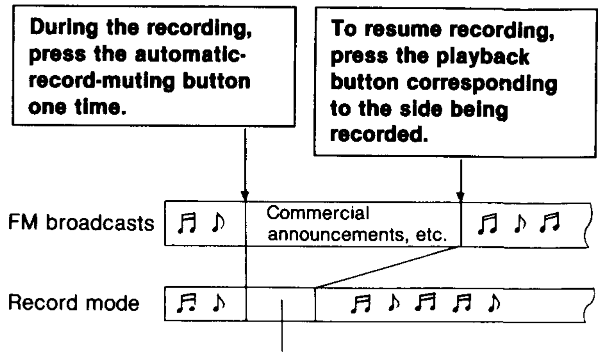
■ CONVENIENT FEATURES FOR RECORDING

Automatic-record-muting function

By simply pressing the automatic-record-muting button while a recording is being made, a silent interval (which is necessary for locating the beginning of a tune) can be made.



This feature is also convenient for omitting, during recording, unwanted material such as commercial messages, etc.



During the recording, press the automatic-record-muting button one time.

To resume recording, press the playback button corresponding to the side being recorded.

A silent interval of about 4 seconds will be made on the tape, and then will change to the recording stand-by mode.

■ To make a silent interval of more than 4 seconds on the tape

Press the automatic-record-muting button for the necessary number of seconds.

The unit will change to the recording stand-by mode when the button is released.

Synchro-recording

This is a convenient feature that, when this unit is in the recording stand-by mode, will start the recording automatically when the compact disc player or turntable begins playing. When the play stops, a silent interval of about 4 seconds will be made, and the tape deck will change to the recording stand-by mode.
This synchro-recording feature can only be used in combination with a Technics compact disc player or turntable that also has the synchro-recording function.

■ TIMER RECORDING/PLAYBACK

If this unit is connected to the tuner (ST-X301L) with the audio timer, recording of radio broadcasts or tape playback will automatically begin at the preset time.
(See the operating instructions of the tuner for detailed information.)

Note:
Playback of one deck only can only be done by deck 2.

Timer recording (tape deck 2 only)

1. **Prepare for recording.**
   After adjusting the recording level, press the stop button.
   Check the tape side ("A" or "B") to be recorded on to be sure it is correct.

2. **Set the tuner to the desired recording-start time and select the recording mode (▣ REC).**
   (At the set time, the power will be switched on and the input selector of the amplifier will be switched to "TUNER"; the recording will then begin.)

■ After setting the timer

Check to be sure that the power switch of the amplifier and the DECK ON/OFF switch of the cassette deck are set to the "ON" position.

Timer playback

Series playback (tape deck 2 and then tape deck 1) is also possible.

1. **Rewind the tape to the position from which you want playback to begin.**
   Check the tape side ("A" or "B") to be played back to be sure it is correct.

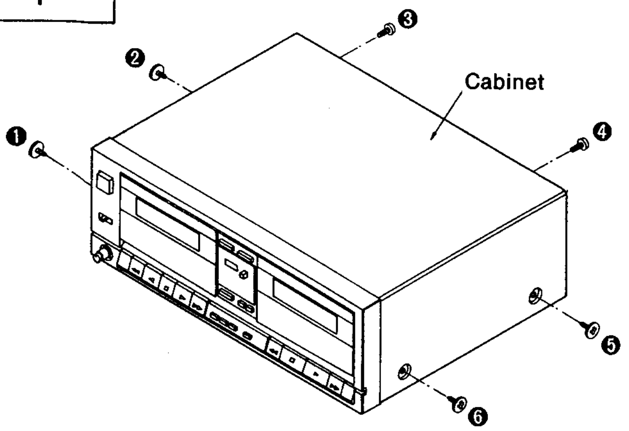
2. **Set the tuner to the desired playback-start time and select the playback mode (▣ PLAY).**
   (At the set time, the power will be switched on and the input selector of the amplifier will be switched to "TAPE"; the playback will then begin.)

■ After setting the timer

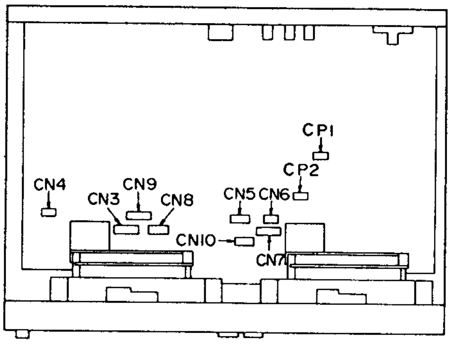
Check to be sure that the power switch of the amplifier and the DECK ON/OFF switch of the cassette deck are set to the "ON" position.

■ DISASSEMBLY INSTRUCTIONS

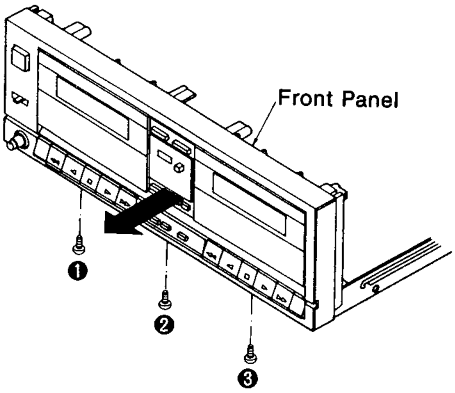
Ref. No. 1	Removal of the Cabinet
Procedure 1	• Remove the 6 screws (❶~❻).


❶
❷
❸
Cabinet
❹
❺
❻

Ref. No. 2	Removal of the Front Panel
Procedure 1→2	1. Remove the 8 flat cables (CN3, CN4, CN5, CN6, CN7, CN8, CN9, CN10). 2. Remove the 2 connections (CP1, CP2).

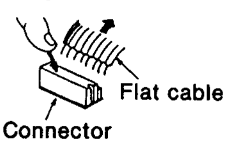

CP1
CP2
CN4
CN9
CN3
CN8
CN5
CN6
CN10
CN7

3. Remove the 3 screws (❶~❸).
4. Remove the front panel in the direction of the arrow.

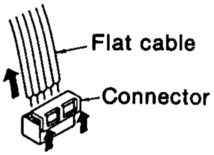

Front Panel
❶
❷
❸

How to remove the flat cable

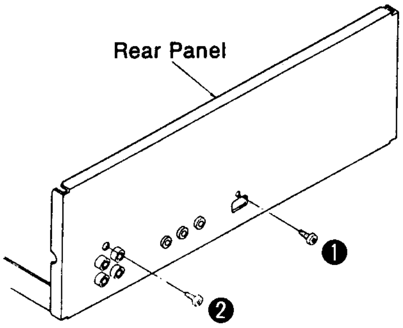
• Pull out the flat cable while pressing the connector.

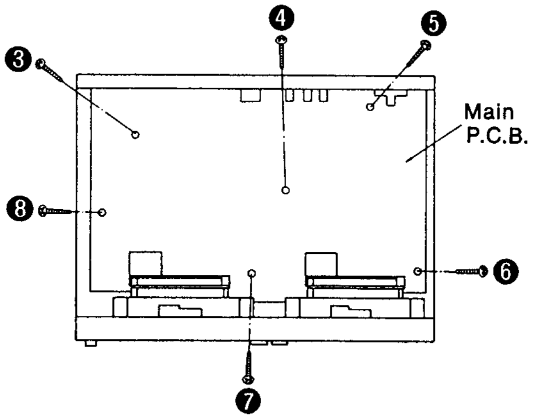

Flat cable
Connector

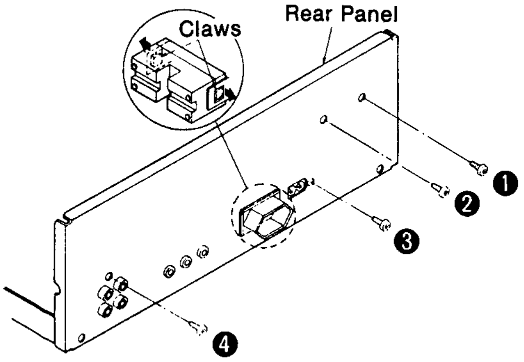
1. Lift the connector.
2. Pull out the flat cable.


Flat cable
Connector

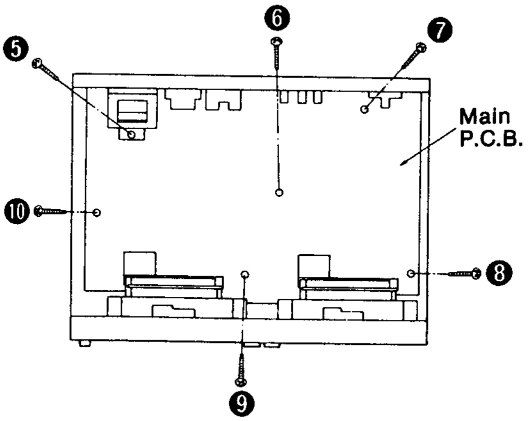
Ref. No. 3	Removal of the Main P.C.B.
Procedure 1→2→3	**[E, EB, GC, GN] areas.** 1. Remove the 8 screws (❶~❽).


Rear Panel
❶
❷


❸
❹
❺
Main P.C.B.
❽
❻
❼


Claws
Rear Panel
❶
❷
❸
❹

[EG] area.
1. Remove the 10 screws (❶~❿).
2. Release the 2 claws of the AC OUT LET cover.

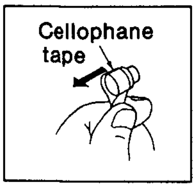

❺
❻
❼
Main P.C.B.
❿
❽
❾

Ref. No. 5

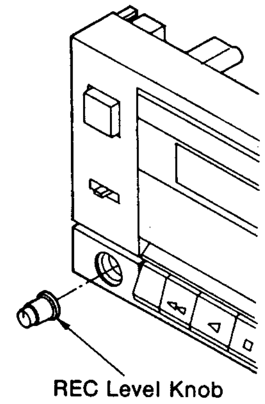
Removal of the Power/Reverse Mode/REC Level P.C.B.

Procedure 1→2→5

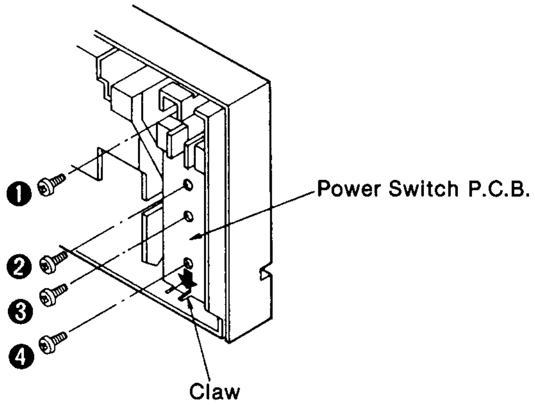
1. Remove the rec level knob.


Cellophane tape

- Wind cellophane tape around the knob and pull it the direction of the arrow.


REC Level Knob

2. Remove the 4 screws (❶~❹).
3. Release the 1 claw.


❶
❷
❸
❹
Power Switch P.C.B.
Claw

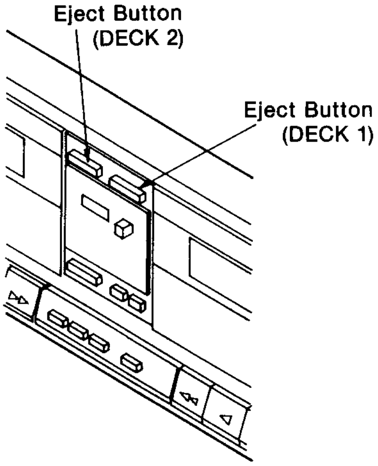
Ref. No. 6

Removal of the Mechanism Units

Procedure 1→2→6

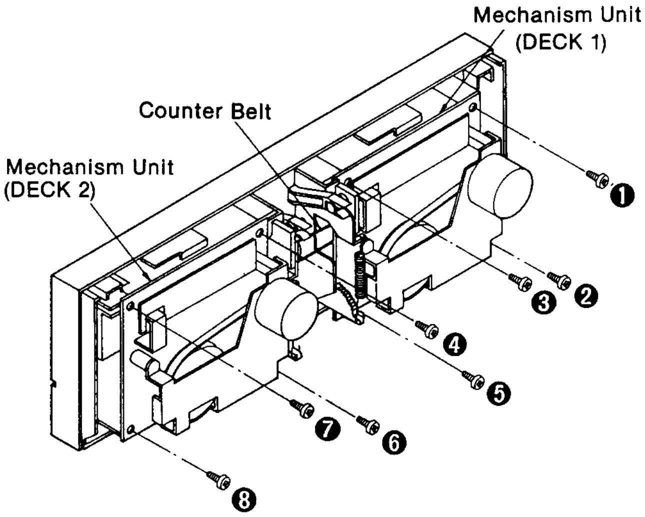
•Removal of the Mechanism Unit (DECK 2)

1. Push the eject button.
2. Remove the counter belt.
3. Remove the 4 screws (❶~❹).


Eject Button (DECK 2)
Eject Button (DECK 1)

•Removal of the Mechanism Unit (DECK 1)

1. Push the eject button.
2. Remove the 4 screws (❺~❽).

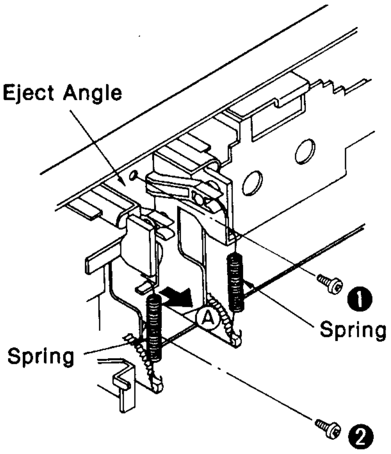

Mechanism Unit (DECK 1)
Counter Belt
Mechanism Unit (DECK 2)
❶
❷
❸
❹
❺
❻
❼
❽

Ref. No. 7

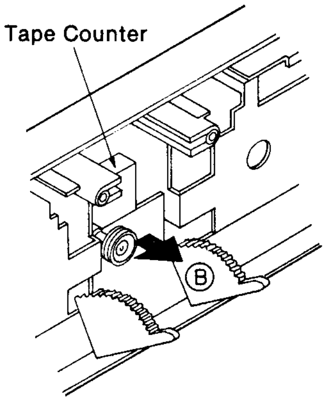
Removal of the Eject Angle and Tape Counter

Procedure 1→2→6→7

1. Remove the spring.
2. Remove the 2 screws (❶, ❷).

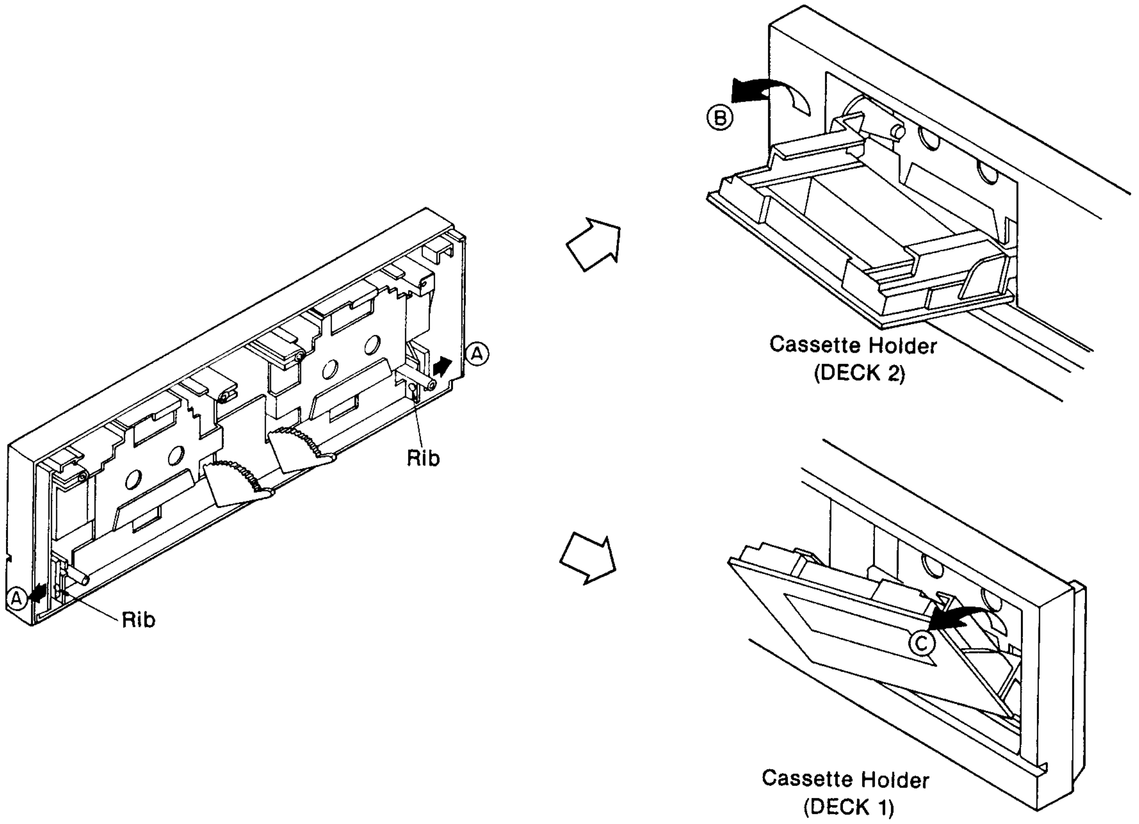

Eject Angle
❶
Ⓐ
Spring
Spring
❷

3. Remove the eject angle in the direction of the arrow Ⓐ.
4. Remove the tape counter in the direction of the arrow Ⓑ.


Tape Counter
Ⓑ

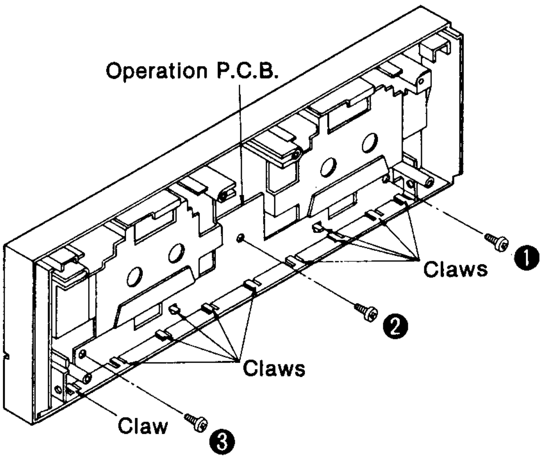
Ref. No. **8**	**Removal of the Cassette Holder**
Procedure **1→2→6** **→7→8**	

1. Remove the ribs in the direction of the arrow Ⓐ.
2. Remove the cassette holder (DECK 2) in the direction of the arrow Ⓑ.
3. Remove the cassette holder (DECK 1) in the direction of the arrow Ⓒ.


Ⓐ
Rib
Ⓐ
Rib
Ⓑ
Cassette Holder
(DECK 2)
Ⓒ
Cassette Holder
(DECK 1)

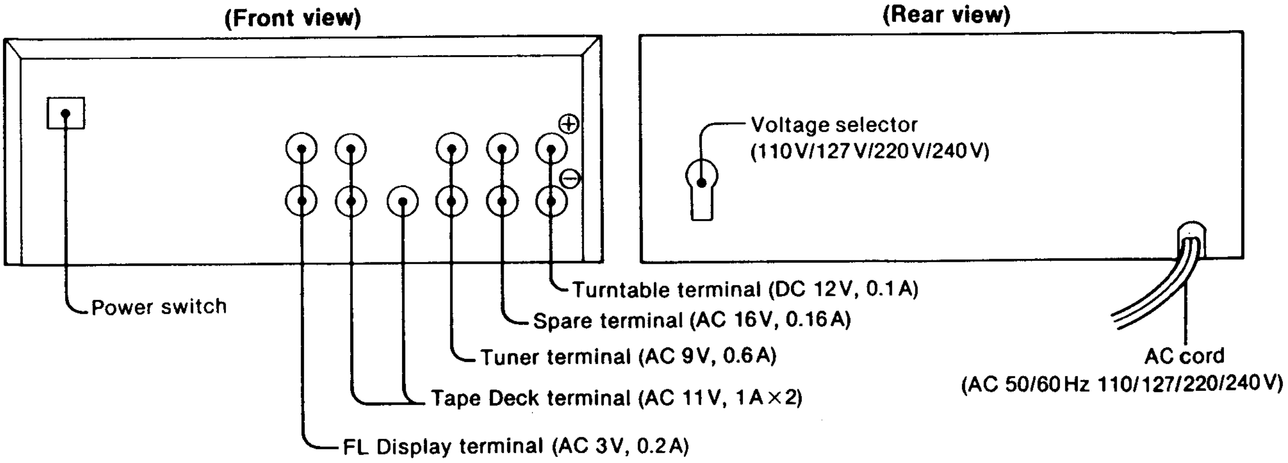
Ref. No. **9**	**Removal of the Operation P.C.B.**
Procedure **8→9**	

1. Remove the 3 screws (❶~❸).
2. Release the 11 claws.

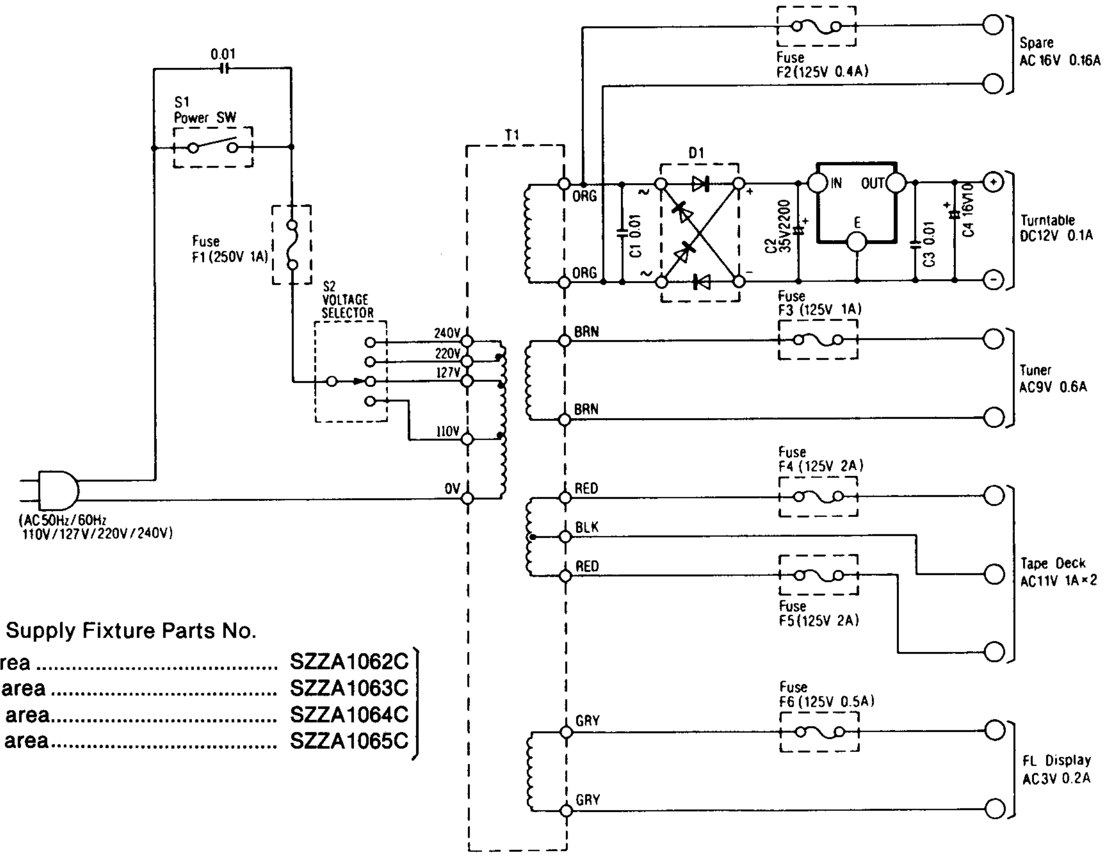

Operation P.C.B.
Claws
❶
❷
Claws
Claw
❸

■ INFORMATION ON POWER SUPPLY FIXTURE

• LOCATION


(Front view)
(Rear view)
Voltage selector
(110V/127V/220V/240V)
Power switch
Turntable terminal (DC 12V, 0.1A)
Spare terminal (AC 16V, 0.16A)
Tuner terminal (AC 9V, 0.6A)
Tape Deck terminal (AC 11V, 1A×2)
FL Display terminal (AC 3V, 0.2A)
AC cord
(AC 50/60Hz 110/127/220/240V)

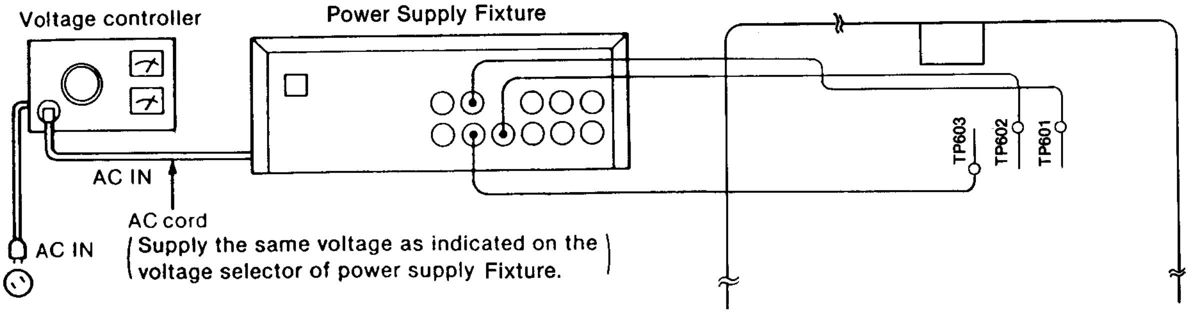
• SCHEMATIC DIAGRAM (Reference)


0.01
S1
Power SW
Fuse
F1 (250V 1A)
S2
VOLTAGE
SELECTOR
T1
240V
220V
127V
110V
0V
(AC50Hz/60Hz
110V/127V/220V/240V)
ORG
ORG
D1
C1 0.01
C2 35V2200
IN
OUT
E
C3 0.01
C4 16V10
Fuse
F2 (125V 0.4A)
Spare
AC16V 0.16A
Turntable
DC12V 0.1A
Fuse
F3 (125V 1A)
BRN
BRN
Tuner
AC9V 0.6A
Fuse
F4 (125V 2A)
RED
BLK
RED
Fuse
F5 (125V 2A)
Tape Deck
AC11V 1A×2
Fuse
F6 (125V 0.5A)
GRY
GRY
FL Display
AC3V 0.2A

※ Power Supply Fixture Parts No.

• (E) area	SZZA1062C
• (EB) area	SZZA1063C
• (GN) area	SZZA1064C
• (GC) area	SZZA1065C

• HOW TO CONNECT


Voltage controller
Power Supply Fixture
AC IN
AC cord
AC IN
TP603
TP602
TP601

(Supply the same voltage as indicated on the voltage selector of power supply Fixture.)

■ MEASUREMENT AND ADJUSTMENT METHODES

Measurement Condition

- Rec. level control; Maximum
- Reverse-mode selector switch; ⇄
- Edit-recording tape-speed selector; X1
- Dolby NR switch; Off
- Make sure heads are clean
- Make sure capstan and pressure roller are clean
- Judgeable room temperature 20±5°C (68±9°F)

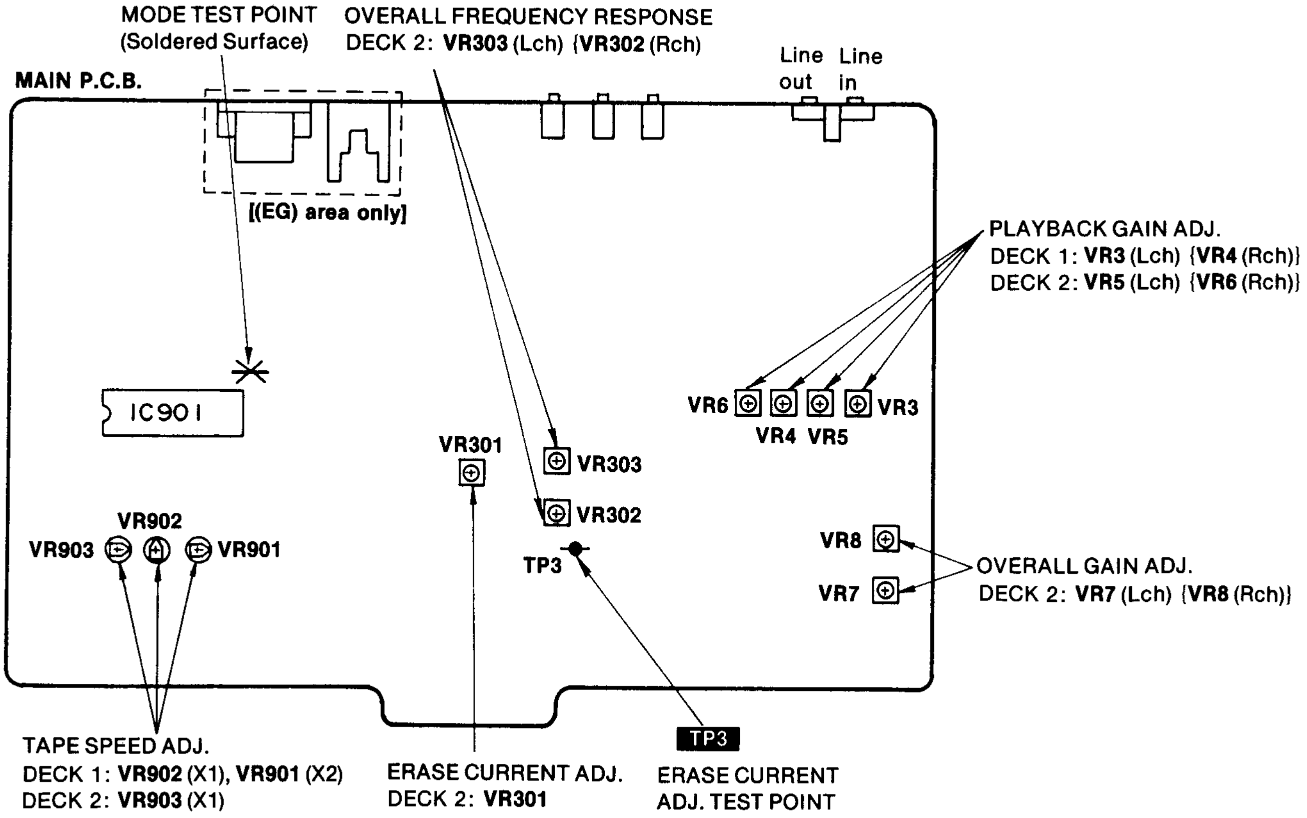
Measuring instrument

- EVM (Electronic Voltmeter)
- Oscilloscope
- Digital frequency counter
- AF oscillator
- ATT (Attenuator)
- DC voltmeter
- Resistor (600Ω)

Test tape

- Head azimuth adjustment (8kHz, −20dB); QZZCFM
- Tape speed adjustment (3kHz, −10dB); QZZCWAT
- Playback frequency response (315Hz, 12.5kHz, 10kHz, 8kHz, 4kHz, 1kHz, 250Hz, 125Hz, 63Hz, −20dB); QZZCFM
- Playback gain adjustment (315Hz, 0dB); QZZCFM
- Overall frequency response, Overall gain adjustment
  Normal reference blank tape ; QZZCRA
  CrO₂ reference blank tape; QZZCRX
  Metal reference blank tape; QZZCRZ

• Adjustment Points


MODE TEST POINT
(Soldered Surface)
OVERALL FREQUENCY RESPONSE
DECK 2: VR303 (Lch) {VR302 (Rch)
MAIN P.C.B.
Line out
Line in
[(EG) area only]
PLAYBACK GAIN ADJ.
DECK 1: VR3 (Lch) {VR4 (Rch)}
DECK 2: VR5 (Lch) {VR6 (Rch)}
IC901
VR6
VR3
VR4
VR5
VR301
VR303
VR302
VR902
VR903
VR901
TP3
VR8
VR7
OVERALL GAIN ADJ.
DECK 2: VR7 (Lch) {VR8 (Rch)}
TAPE SPEED ADJ.
DECK 1: VR902 (X1), VR901 (X2)
DECK 2: VR903 (X1)
ERASE CURRENT ADJ.
DECK 2: VR301
TP3
ERASE CURRENT
ADJ. TEST POINT

HEAD AZIMUTH ADJUSTMENT (DECK 1/2)

1. Playback the azimuth adjustment portion (8kHz, −20dB) of the test tape (QZZCFM). Vary the azimuth adjusting screw until the outputs of the L-CH and R-CH are maximized and the lissajous waveform, as illustrated, approaches 0 degrees.

Note: If L-CH and R-CH are not maximized at the same point, adjust to the point where the levels of each channel are maximized and equal.

2. Perform the same adjustment in the play mode.
3. After the adjustment, apply screwlock to the azimuth adjusting screw.

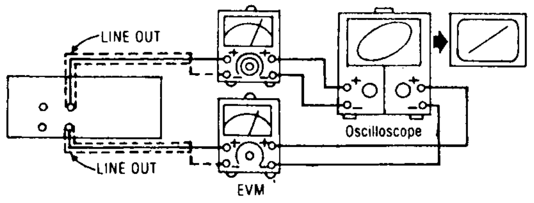
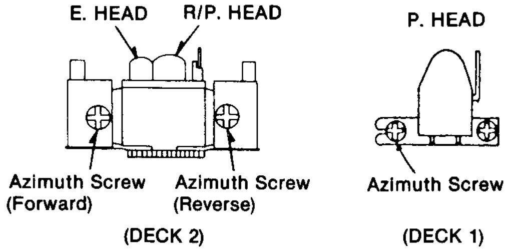


Fig. 1



(DECK 2)

(DECK 1)

Fig. 2

TAPE SPEED ADJUSTMENT (DECK 1/2)

Normal speed

1. Shift the edit-recording tape-speed selector to "**X1**".
2. Playback the middle portion of the test tape (QZZCWAT).
3. Adjust Deck 1=**VR902** and Deck 2=**VR903** so that the output is within the standard value.

High speed

4. Shift the edit-recording tape speed switch to "**X2**".
5. Playback the middle portion of the test tape (QZZCWAT).
6. Adjust Deck 1=**VR901** so that the output is within the standard value.

Note: The Normal speed adjustment must be done before the High speed adjustment.

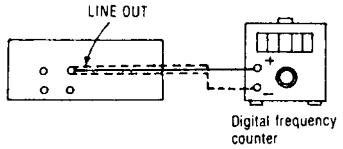


Fig. 3

(DECK 2) Standard value: 3000±15Hz [Normal (X1)], 6000±600Hz [High (X2), only confirmation]
(DECK 1) Standard value: 3000±15Hz [Normal (X1)], 6000±30Hz [High (X2)]

PLAYBACK GAIN ADJUSTMENT (DECK 1/2)

1. Playback the gain adjusted portion (315Hz, 0dB) of the test tape (QZZCFM).
2. Adjust Deck 1 = **VR3** (L-CH) [[**VR4** (R-CH)]] and Deck 2 =**VR5** (L-CH) [[**VR6** (R-CH)]] so that the output is within the standard value.

Standard value: 0.4V±0.5dB

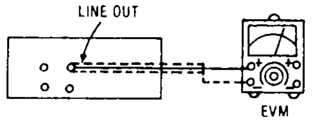


Fig. 4

PLAYBACK FREQUENCY RESPONSE (DECK 1/2)

1. Playback the frequency response portion (315Hz, 12.5kHz~63Hz, −20dB) of the test tape (QZZCFM).
2. Assure that the frequency response is within the range shown in **Fig. 6** for both L-CH and R-CH.

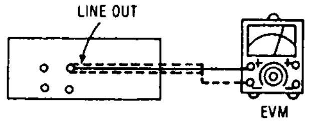


Fig. 5

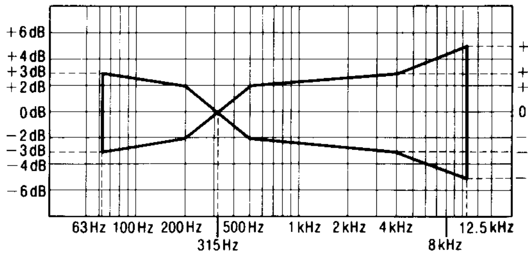


Fig. 6

ERASE CURRENT ADJUSTMENT (DECK 2)

1. Insert the Metal blank test tape (QZZCRZ) and set the unit to the Record Pause mode.
2. Adjust **VR301** so that the output between **TP3** and GND is within the standard value.

Standard value: 190±5mA (Metal)...EVM Reading: 190±5mV

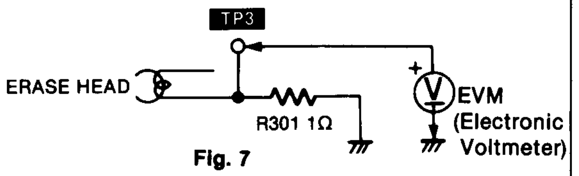


Fig. 7

OVERALL FREQUENCY RESPONSE (DECK 2)

1. Insert the Normal blank test tape (QZZCRA) and set the unit to the Record Pause mode.
2. Apply a reference input signal (1kHz, −24dB) through an attenuator.
3. Attenuate the signal by 20dB and adjust the frequency from 50Hz~10kHz.
4. Record the frequency sweep.
5. Playback the recorded signal and assure that it is within the range shown in **Fig. 8** in comparison to the reference frequency (1kHz).
6. If it is not within the standard range, adjust **VR303** (L-CH) and **VR302** (R-CH) so that the frequency level is within the standard range.
   - Level up in high frequency range........Increase the bias current.
   - Level down in high frequency range...Decrease the bias current.
7. Repeat steps 2~6 above using the CrO_2 tape (QZZCRX) and the Metal tape (QZZCRZ) increasing the frequency range to 12.5kHz (50Hz~12.5kHz).
8. Assure that the level is within the range shown in **Fig. 9**.

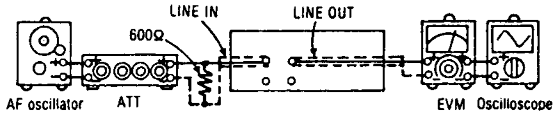


Fig. 10

Normal Overall frequency response chart (NR OUT)

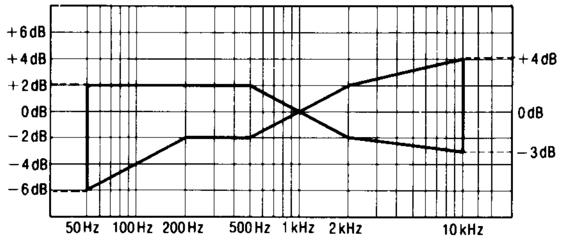


Fig. 8

CrO_2 Metal Overall frequency response chart (NR OUT)

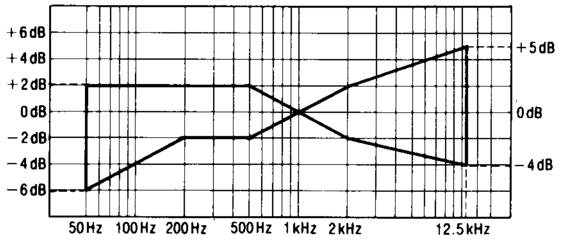


Fig. 9

OVERALL GAIN ADJUSTMENT (DECK 2)

1. Insert the Normal blank test tape (QZZCRA) and set the unit to the Record pause mode.
2. Apply a reference input signal (1kHz, −24dB). Attenuate the output so that its level becomes 0.4V.
3. Record this input signal.
4. Playback the signal recorded in step 3 above, and assure that the output is within the standard value.
5. If it is not within the standard value, adjust **VR7** (L-CH) and **VR8** (R-CH).
6. Repeat the step 2~5 above until the output is within the standard value.

Standard value: 0.4V±0.5dB

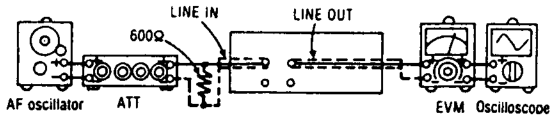


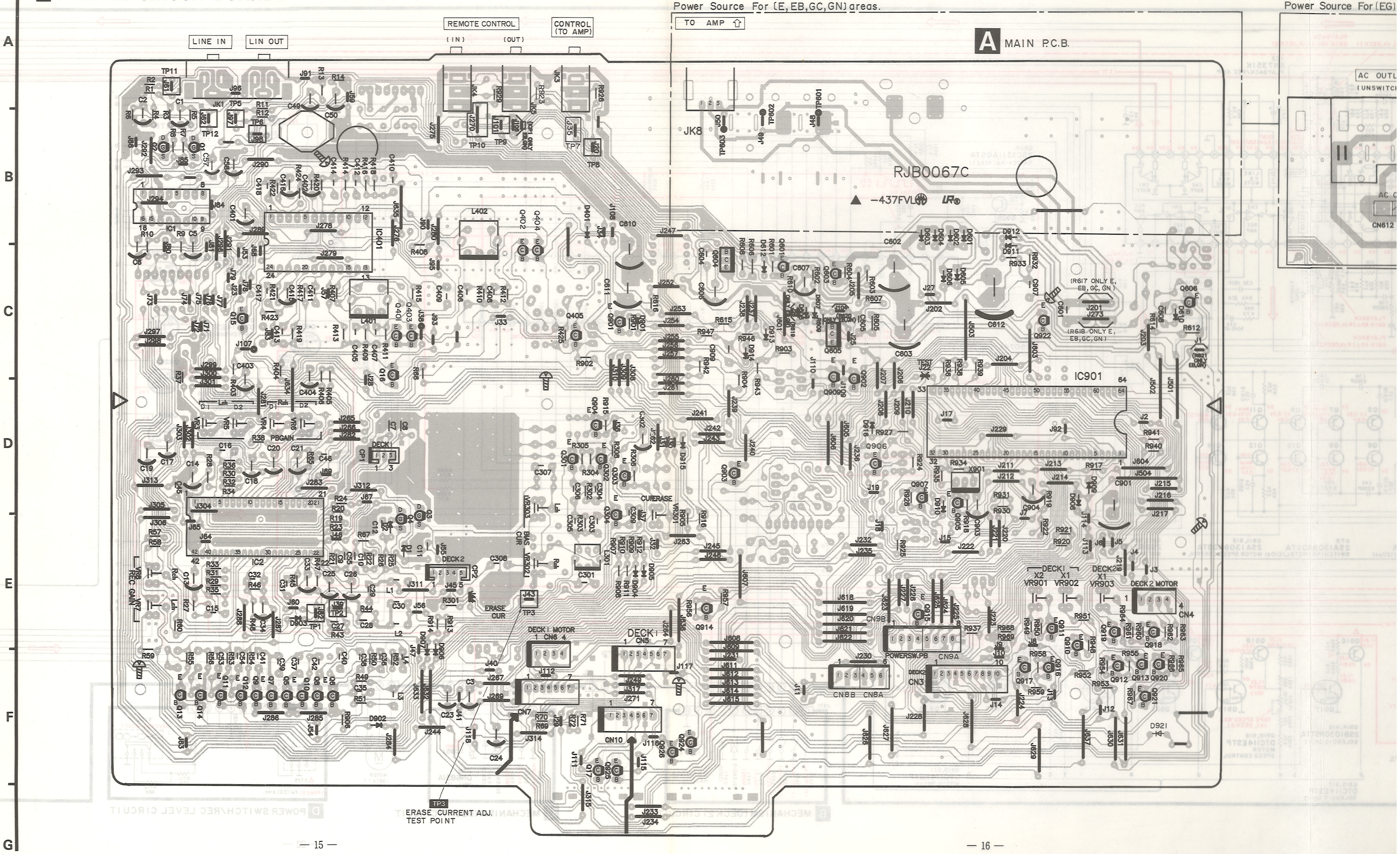
Fig. 11

■ TERMINAL FUNCTION OF IC's

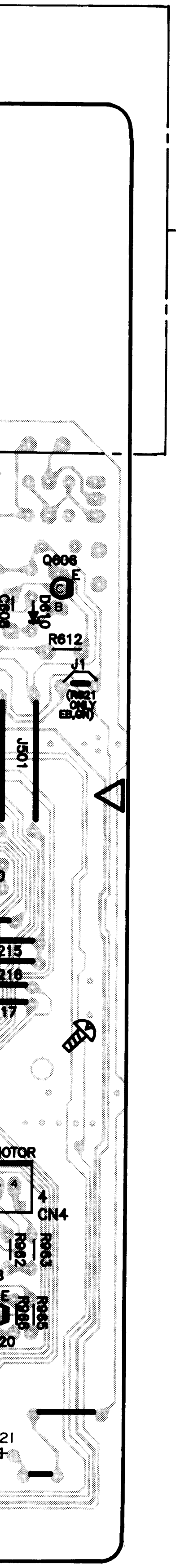
• IC901 (M50746-166SP): MICROCOMPUTER

Pin No.	Mark	I/O Division	Function
1	Vcc	I	Power supply terminal
2	AV_{SS}	—	• Connected to V_{SS}
3	V_{REF}	I	Standard voltage terminal (5V)
4	CRM	O	CUE/REV mute signal • "L" level in muting is off mode. • "H" level in muting is on mode.
5	$\overline{\text{DIR 2}}$	O	Direction indicator signal of deck 2 • "L" level with forward mode. • "OPEN" with reverse mode.
6	MMT	O	Mater mute control signal • "L" level in muting is off mode. • "OPEN" when muting is on mode.
7	LMT	O	Line out mute signal (Not used, open)
8	RMT 2	O	Rec. amp. mute signal of deck 2 • "L" level in mute is off mode. • "H" level in mute is on mode.
9	DMT	O	Line out mute signal (Not used) • "L" level in muting is off mode. • "OPEN" when muting is on mode.
10	REV 2	—	Connected to GND
11	REV 1	—	Connected to GND
12	KEY 2	I	Key switch scan (DECK 2: STOP, F.F., REW, F. PLAY, R. PLAY, REC., PAUSE, S. START, X2, X1, DOLBY NR)
13	KEY 1	I	Key switch scan (DECK 1: STOP, F.F., REW, PLAY)
14	$\overline{\text{PLAY 2}}$	O	Deck 2 Playback LED display/CUE, REV, LED display
15	$\overline{\text{PLAY 1}}$	O	Deck 1 Playback LED display/CUE, REV, LED display
16	$\overline{\text{ARM 2}}$	I	Auto Rec. mute terminal. "L"=KEY ON, "H"=KEY OFF
17	$\overline{\text{REC 1}}$	I	Not used.
18	$\overline{\text{REC 2}}$	O	Deck 2 Rec. mode LED display • "L" level in Deck 2 Rec. mode. • "H" level in other mode.
19	$\overline{\text{REM 2}}$	O	Deck 2 Remote control LED display • "L" level in LED on mode. • "H" level in LED off mode.
20	$\overline{\text{REM 1}}$	O	Deck 1 Remote control LED display • "L" level when LED is on mode. • "H" level when LED is off mode.
21	RENA	O	1 side select signal to CD player, used during CD synchro editing mode.
22	SYNC	I	Synchro start signal input from CD player
23	RCS	I	Remote control serial data
24	TREC	I	Timer rec terminal
25	TPLAY	I	Timer play terminal
26	POF	I	Primary AC power detection terminal
27	CNV_{SS}	—	Connected to GND
28	$\overline{\text{RESET}}$	I	Reset terminal • "L" level when reset is on mode. • "L" → "H" level when reset is off mode.
29	XIN	I	Clock OSC terminal
30	XOUT	O	
31	Φ	I	Not used, open.
32	V_{SS}	—	Connected to GND
33	$\overline{\text{TEST}}$	—	Test terminal
34	PWIN	I	Power ON/OFF switch input • "L" level with power ON • "H" level with power OFF
35	REEL 1	I	Deck 1 Rotation pulse signal of reel table
36	REEL 2	I	Deck 2 Rotation pulse signal of reel table
37	RINH 2	I	Deck 2 Reverse Rec. Inh. switch select terminal
38	FINH 2	I	Deck 2 Forward Rec. Inh. switch select terminal
39	MODE 1	I	Deck 1 mechanism mode switch select termnal
40	HALF 1	I	Deck 1 cassette half detection switch • "L" level in half detection switch is on mode. • "H" level in half detection switch is off mode.
41	MPX	O	MPX filter IN/OUT control signal • "OPEN" with Dolby NR "IN" • "L" level with Dolby NR "OUT"
42	$\overline{\text{T2}}$	O	Deck 2 play select signal • "L" level with PLAY/CUE/REVIEW mode. • "H" level with any other mode.
43	$\overline{\text{X2}}$	O	X2 Speed LED display • "L" level when LED is on mode. • "OPEN" when other mode.
44	$\overline{\text{X1}}$	O	X1 Speed LED display • "L" level when LED is on mode. • "OPEN" when other mode.
45	T/S	I	Connected to GND
46	$\overline{\text{C}}$	O	Dolby C LED display • "L" level when LED is on mode. • "OPEN" when other mode. (Not used, open.)
47	$\overline{\text{B}}$	O	Dolby B LED display • "L" level when LED is on mode. • "OPEN" when other mode.
48	$\overline{\text{ENC}}$	O	Encode/Decode select signal • "L" level in encode mode. • "H" level in decode mode.
49	C/M	I	Deck 1 one-way mechanism select terminal (Connected to GND)
50	$\overline{\text{PWOUT}}$	O	Power ON/OFF output terminal
51	$\overline{\text{SDATA}}$	O	Serial data output (Not used, open)
52	P04 (∞)	O	Not used, open
53	P03 (⊂⊃)	O	Not used, open
54	P02 (⇄)	O	Not used, open
55	DIR 1	O	Direction indicator signal of deck B (Not used, open)
56	FINH 1	I	Deck 1 Forward Rec. Inh. switch select terminal
57	HSP 1	O	Deck 1 Motor speed control signal • "L" level when normal speed (X1). • "H" level when high speed (X2).
58	SOL 1	O	Deck 1 Solenoid control signal • "H" level when solenoid is on mode. • "L" level when solenoid is off mode.
59	MOTOR 1	O	Deck 1 Motor control signal • "H" level when motor is on mode. • "L" level when motor is off mode.
60	MODE 2	I	Deck 2 mechanism mode switch select terminal
61	HALF 2	I	Deck 2 cassette half detection switch • "L" level in half detection switch in on mode. • "H" level in half detection switch in off mode.
62	HSP 2	O	Deck 2 Motor speed control signal • "H" level when normal speed (X1). • "L" level when high speed (X2).
63	SOL 2	O	Deck 2 Solenoid control signal • "H" level when solenoid is on mode. • "L" level when solenoid is off mode.
64	MOTOR 2	O	Deck 2 Motor control signal • "H" level when motor is on mode. • "L" level when motor is off mode.

■ PRINTED CIRCUIT BOARDS

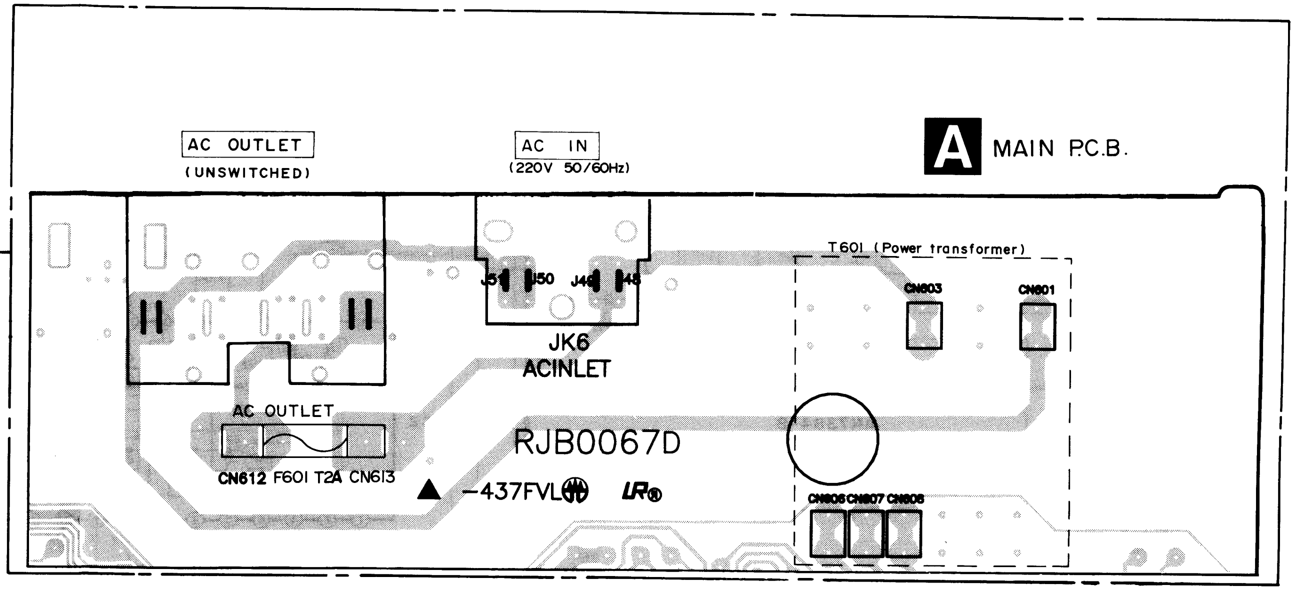

1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
LINE IN
LIN OUT
REMOTE CONTROL
(IN)
(OUT)
CONTROL
(TO AMP)
Power Source For (E, EB, GC, GN) areas.
TO AMP ⇧
A MAIN P.C.B.
Power Source For (EG)
AC OUTL
(UNSWITCH
JK8
RJB0067C
▲ -437FVL
IC1
IC2
IC401
IC901
L401
L402
PBGAIN
REC GAIN
DECK1
DECK2
DECK1 MOTOR
DECK2 MOTOR
CN4
CN5
CN6
CN7
CN8A
CN8B
CN9A
CN9B
CN10
CN3
POWERSW.PB
CUR/ERASE
BIAS CUR
ERASE CUR
VR301
VR302
VR303
VR901
VR902
VR903
X901
TP3
(R617 ONLY E, EB, GC, GN)
(R618 ONLY E, EB, GC, GN)

TP3
ERASE CURRENT ADJ.
TEST POINT

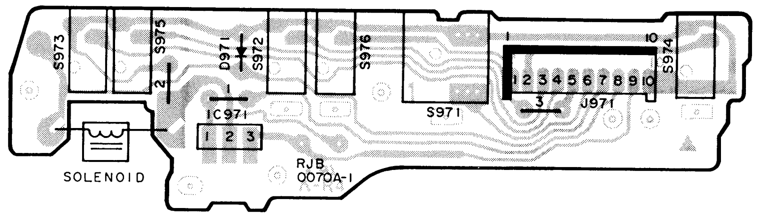

Q606
E
B
D610
R612
J1
(R621 ONLY EB,GN)
J501
215
216
17
OTOR
4
CN4
R662
R663
R665
R666
20
21

Power Source For (EG) area

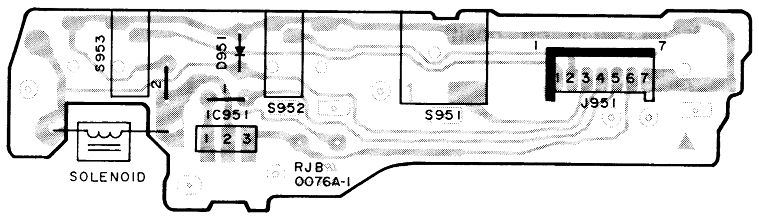
A MAIN P.C.B.


AC OUTLET
(UNSWITCHED)
AC IN
(220V 50/60Hz)
J51
J50
J49
J48
JK6
ACINLET
T601 (Power transformer)
CN603
CN601
AC OUTLET
CN612 F601 T2A CN613
RJB0067D
▲ -437FVL
CN606 CN607 CN608

B MECHANISM (DECK 2) P.C.B.


S973
S975
2
D971
S972
S976
S974
1 2 3 4 5 6 7 8 9 10
3
J971
S971
IC971
1 2 3
SOLENOID
RJB 0070A-1

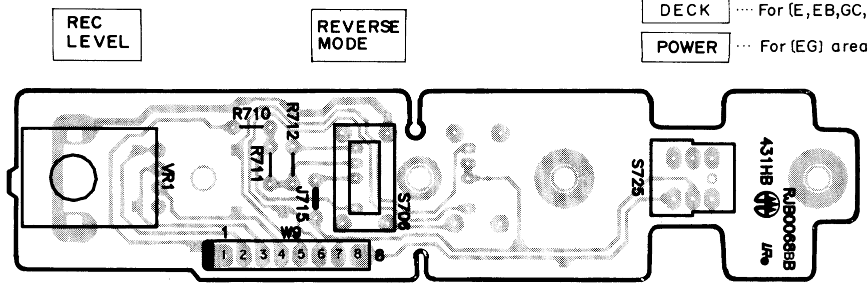
C MECHANISM (DECK 1) P.C.B.


S953
2
D951
1
7
1 2 3 4 5 6 7
J951
IC951
S952
S951
1 2 3
SOLENOID
RJB 0076A-1

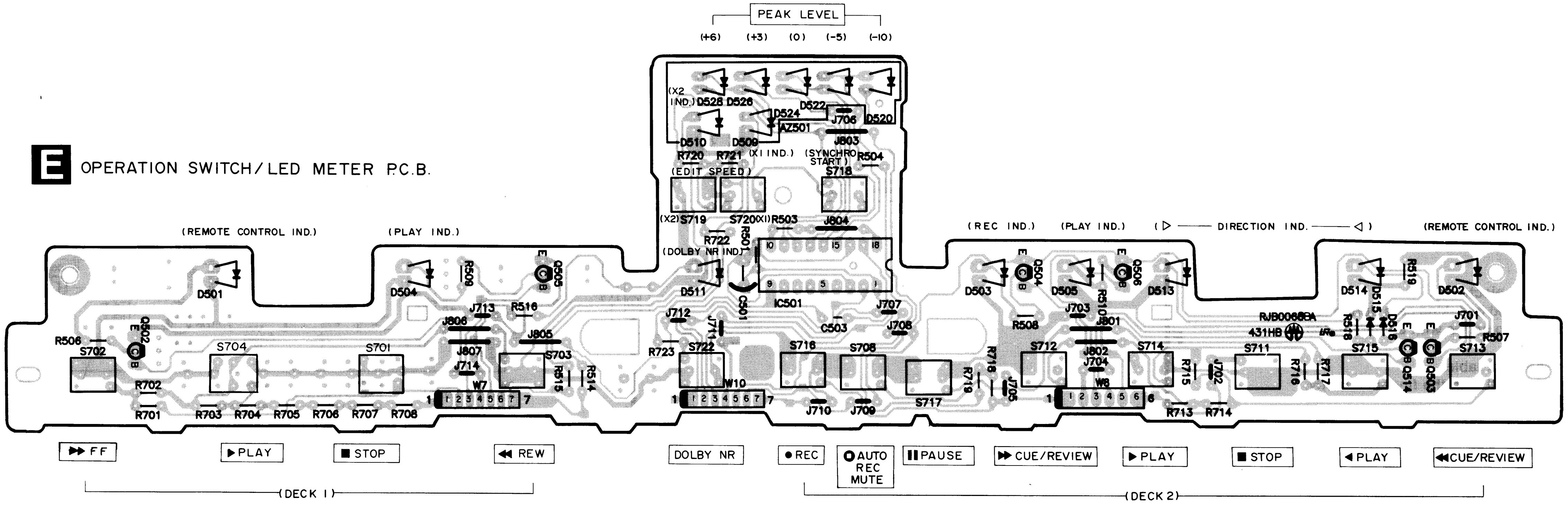
D POWER SWITCH / REC LEVEL P.C.B.

DECK ···· For (E, EB, GC, GN) areas.

POWER ···· For (EG) area.


REC LEVEL
REVERSE MODE
VR1
R710
R712
R711
J715
S706
W9
1 2 3 4 5 6 7 8
8
S725
431HB
RJB0068BB

E OPERATION SWITCH / LED METER P.C.B.


PEAK LEVEL
(+6) (+3) (0) (-5) (-10)
(X2 IND.) D528 D526
D524
D522
J706
D520
AZ501
D510
D508
J803
R720 R721 (X1 IND.)
(SYNCHRO START)
R504
(EDIT SPEED)
S718
(X2) S719
S720 (X1)
R503
J804
R722
(DOLBY NR IND.)
R501
D511
C501
IC501
(REMOTE CONTROL IND.)
(PLAY IND.)
D501
D504
R509
Q505
J713
R516
J806
J805
J712
J711
J707
C503
J708
R723
S722
S716
S706
(REC IND.)
(PLAY IND.)
(▷ ——— DIRECTION IND. ——— ◁)
(REMOTE CONTROL IND.)
D503
Q504
D505
R510
Q506
D513
D514
D515
R519
D502
J703
R508
J801
RJB0068BA
431HB
R518
D516
J701
R507
R506
S702
Q502
S704
S701
J807
J714
S703
R515
R514
W10
S717
J710
J709
R719
R716
J705
S712
J802
J704
W8
S714
R715
J702
S711
R717
R716
S715
Q514
Q503
S713
W7
R702
R701
R703 R704 R705 R706 R707 R708
R713 R714
▶▶ FF
▶PLAY
■ STOP
◀◀ REW
DOLBY NR
● REC
○ AUTO REC MUTE
❚❚ PAUSE
▶▶ CUE/REVIEW
▶ PLAY
■ STOP
◀ PLAY
◀◀ CUE/REVIEW
(DECK 1)
(DECK 2)

SCHEMATIC DIAGRAM

(Parts list on pages 38~41.)

(This schematic diagram may be modified at any time with development of new technology.)

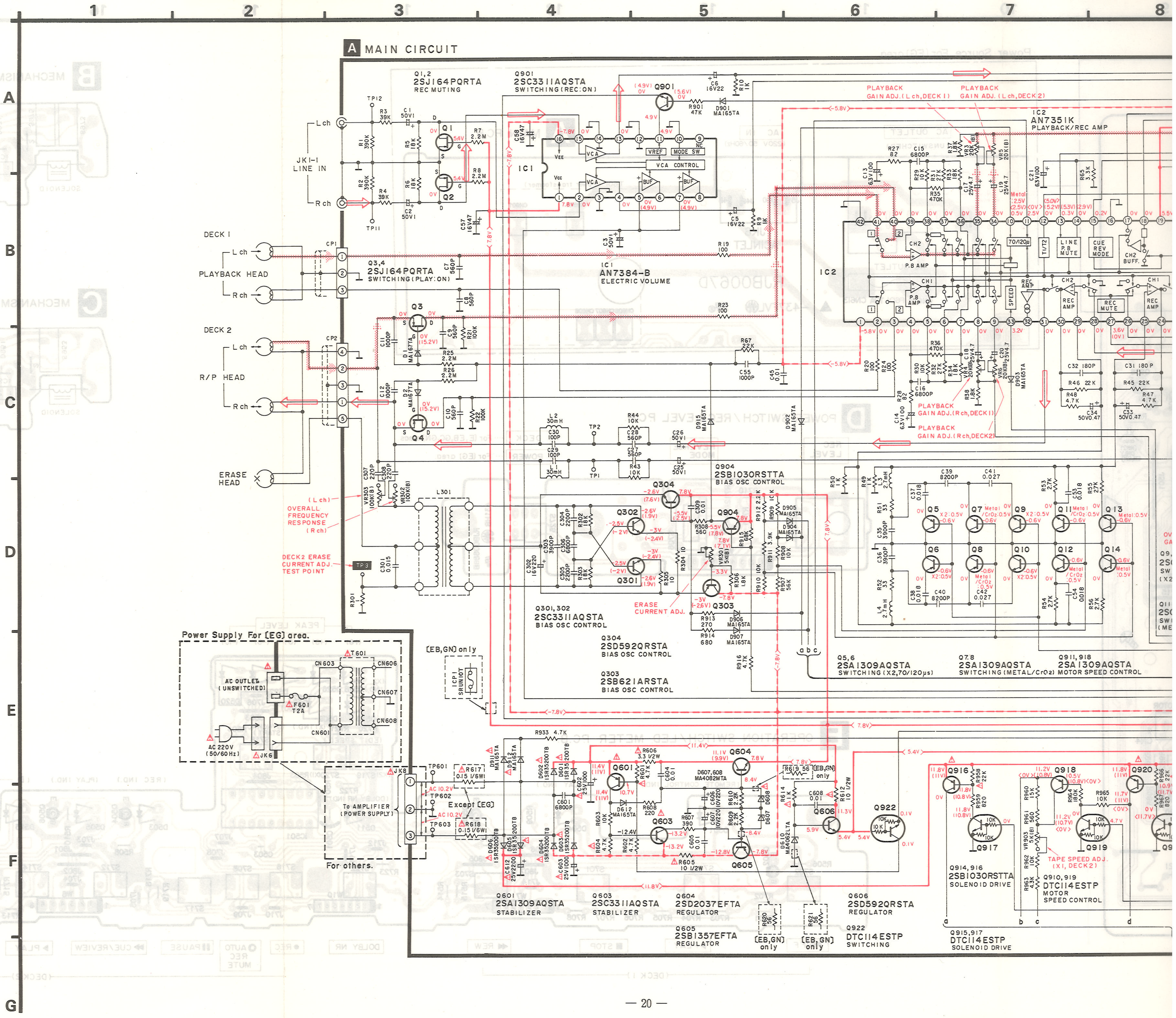
Notes:

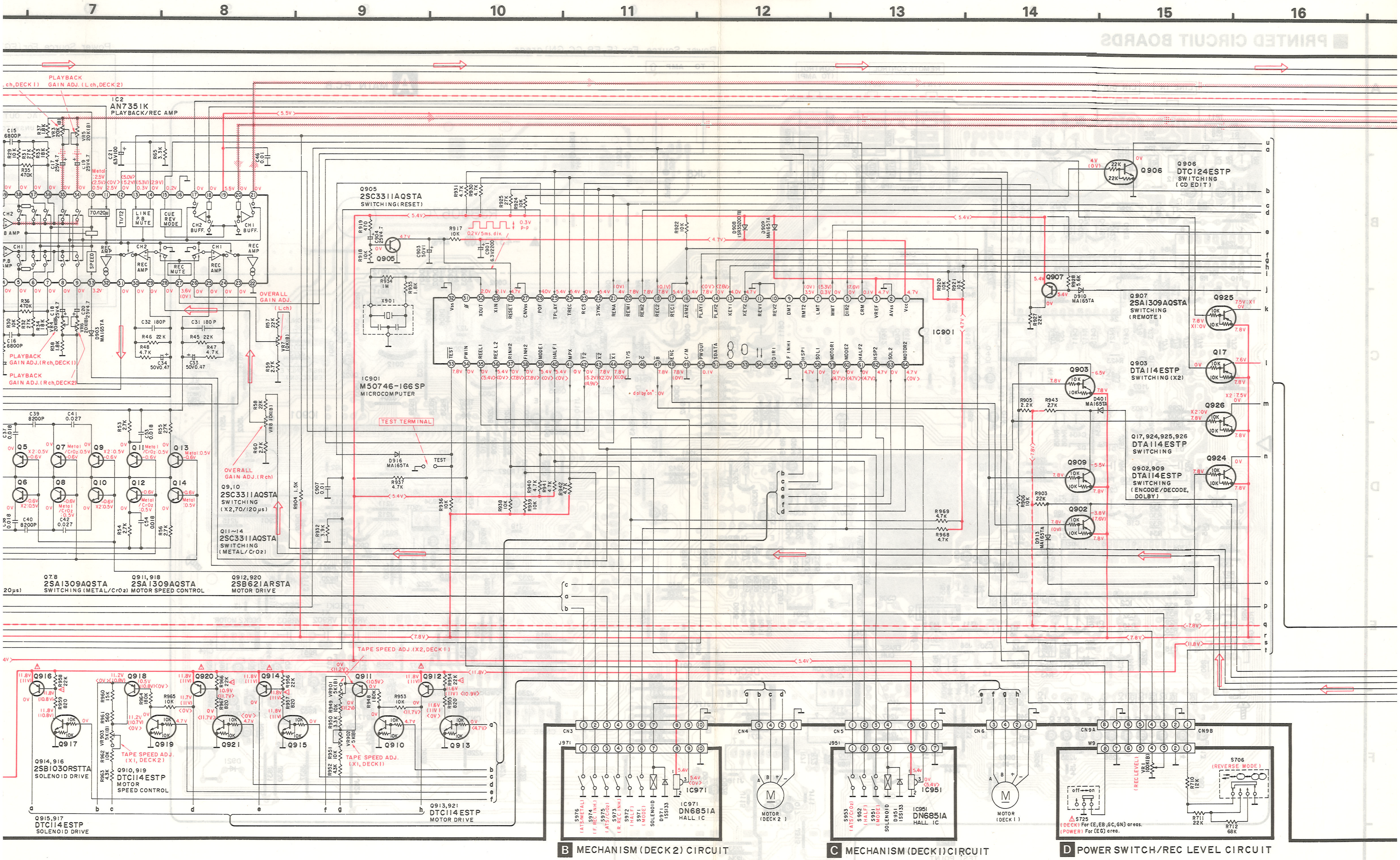
- S701: DECK 1 Stop switch in "**off**" position.
- S702: DECK 1 F.F. switch in "**off**" position.
- S703: DECK 1 Rew. switch in "**off**" position.
- S704: DECK 1 Playback switch in "**off**" position.
- S706: Reverse mode selector switch in "**off**" position.
- S708: DECK 2 Auto rec. mute switch in "**off**" position.
- S711: DECK 2 Stop switch in "**off**" position.
- S712: DECK 2 F.F. switch in "**off**" position.
- S713: DECK 2 Rew. switch in "**off**" position.
- S714: DECK 2 For. Playback switch in "**off**" position.
- S715: DECK 2 Rev. Playback switch in "**off**" position.
- S716: DECK 2 Record switch in "**off**" position.
- S717: DECK 2 Pause switch in "**off**" position.
- S718: Synchro-start switch in "**off**" position.
- S719: Editing tape speed selector (X2) in "**off**" position.
- S720: Editing tape speed selector (X1) in "**off**" position.
- S722: Dolby NR switch in "**off**" position.
- S725: Power switch in "**on**" position.
- S951: DECK 1 Mode switch in "**off**" position.
- S952: DECK 1 Cassette half detection switch in "**off**" position.
- S953: DECK 1 ATS (CrO_2) switch in "**off**" position.
- S971: DECK 2 Mode switch in "**off**" position.
- S972: DECK 2 Cassette half detection switch in "**off**" position.
- S973: DECK 2 Rev. Rec Inhibit switch in "**off**" position.
- S974: DECK 2 For. Rec Inhibit switch in "**off**" position.
- S975: DECK 2 ATS (CrO_2) switch in "**off**" position.
- S976: DECK 2 ATS (Metal) switch in "**off**" position.
- Resistance are in ohms (Ω), 1/4 watt unless specified otherwise.
  1 K=1,000 (Ω), 1 M=1,000 k (Ω)
- Capacity are in micro-farads (μF) unless specified otherwise.
- All voltage values shown in circuitry are under no signal condition and playback mode of deck 2 with volume control at minimum position otherwise specified.
  < > ....Voltage values at playback mode of deck 1.
  ( ).........Voltage values at record mode.
  For measurement us EVM.
- Important safety notice
  Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
- (▬▬<+B>▬▬) indicates +B (bias).
- (▪▪▪▪<−B>▪▪▪▪) indicates −B (bias).
- (⇨) indicates the flow of the playback signal.
- (⇨) indicates the flow of the record signal.

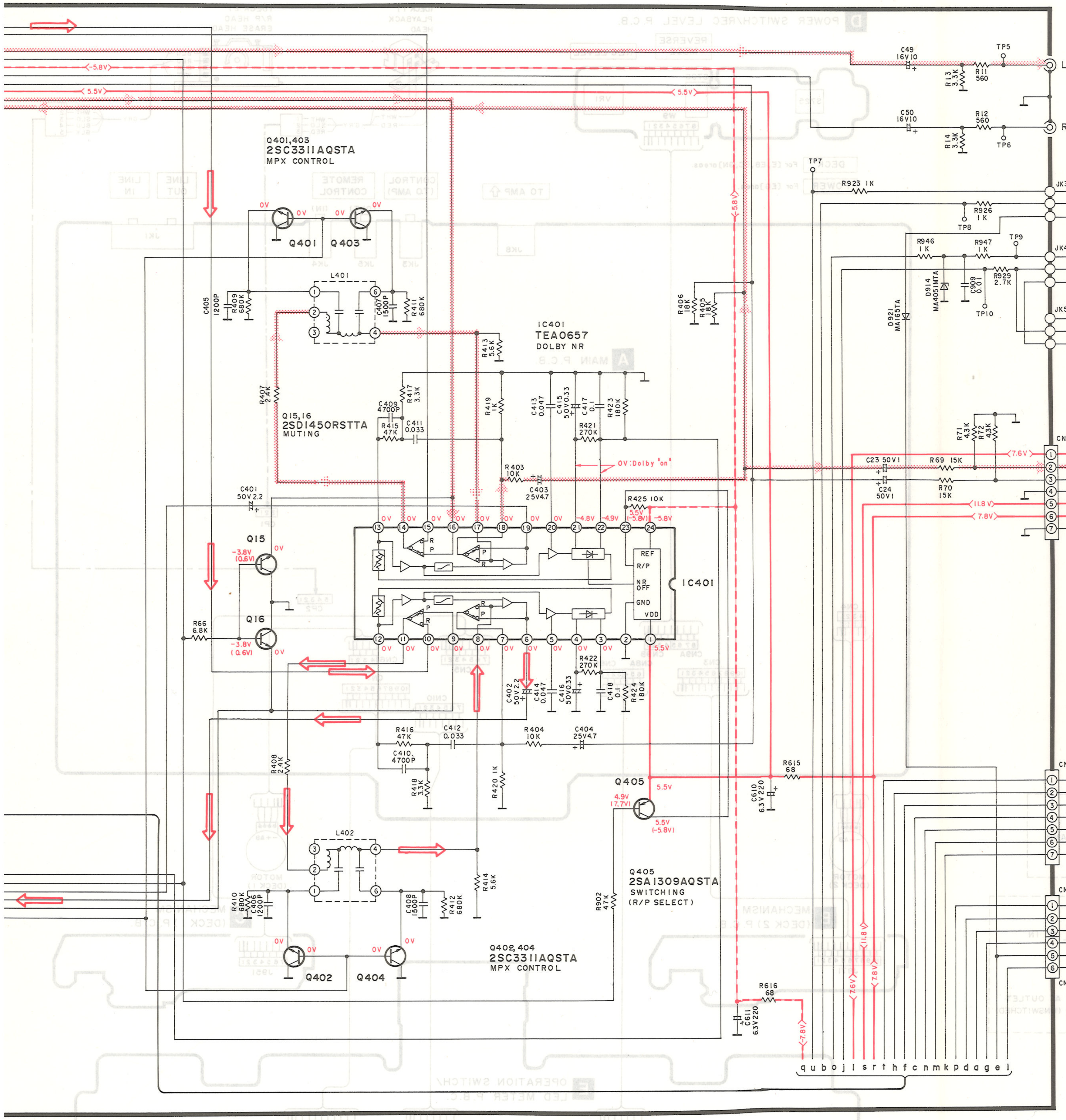
∗ Caution!

IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.

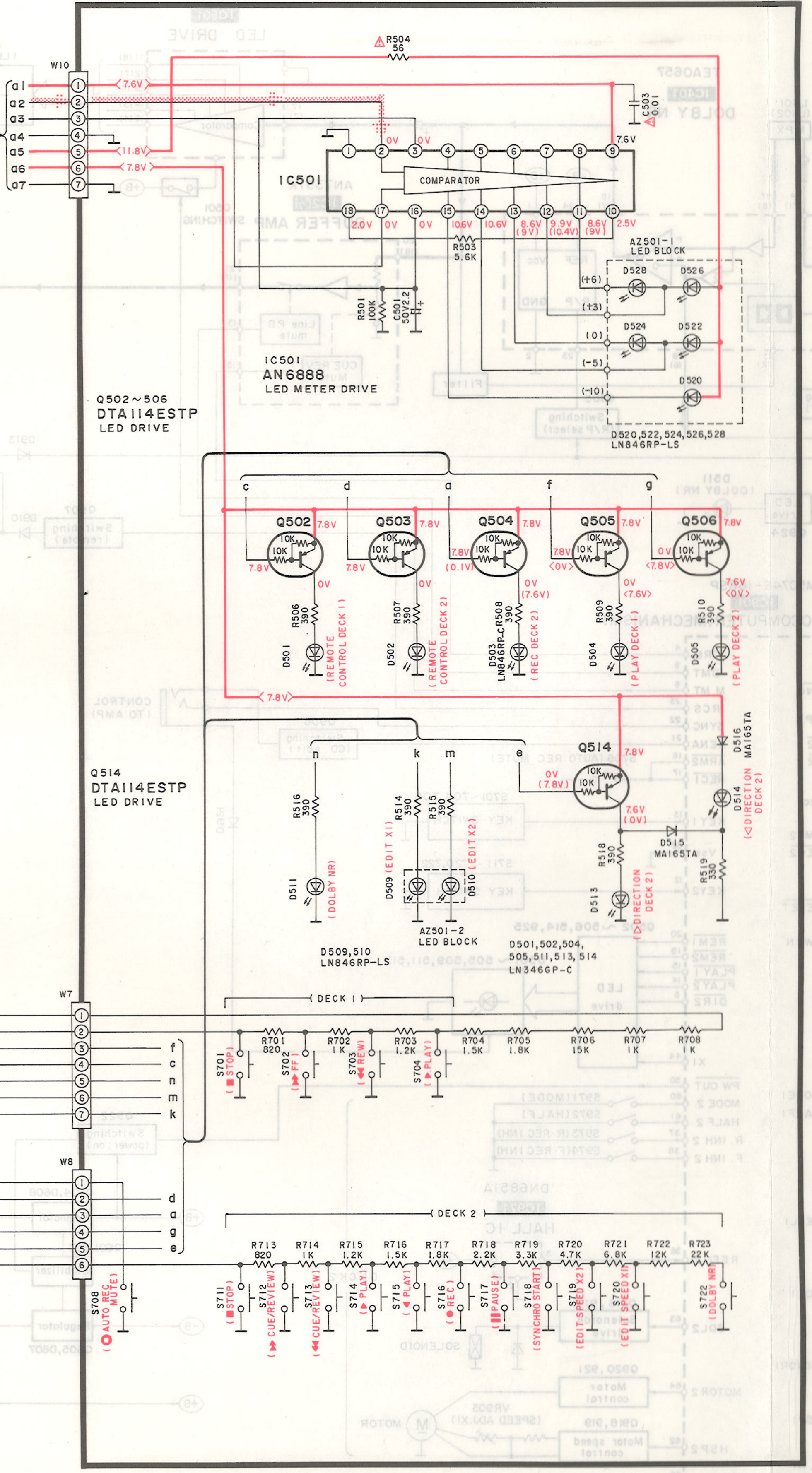
∗ Cover the parts boxes made of plastics with aluminum foil.
∗ Ground the soldering iron.
∗ Put a conductive mat on the work table.
∗ Do not touch the legs of IC or LSI with the fingers directly.

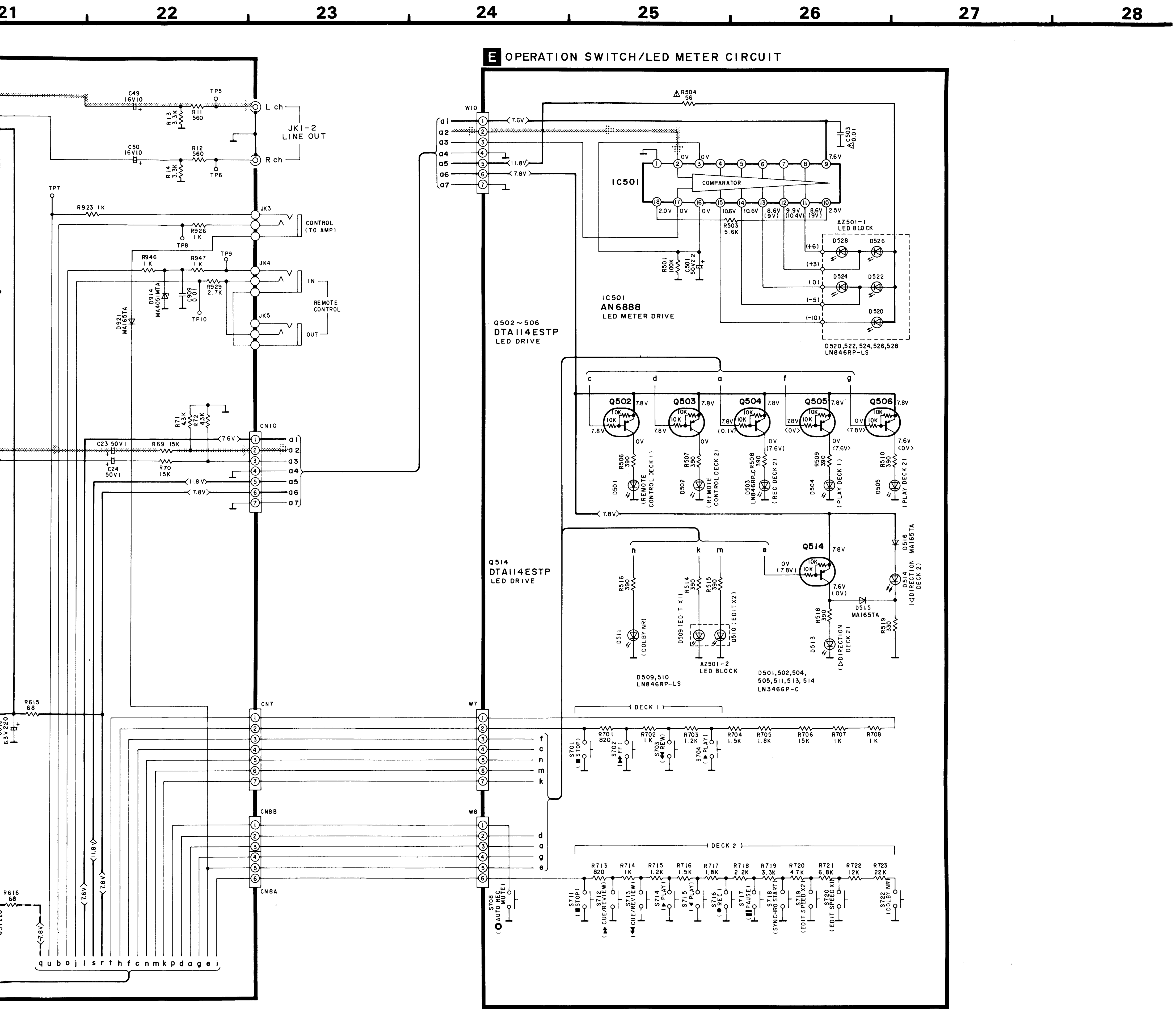

1
2
3
4
5
6
7
8
A
B
C
D
E
F
G
A MAIN CIRCUIT
Q1,2 2SJ164PQRTA REC MUTING
Q901 2SC3311AQSTA SWITCHING (REC:ON)
JK1-1 LINE IN
L ch
R ch
IC1
IC1 AN7384-B ELECTRIC VOLUME
IC2
IC2 AN7351K PLAYBACK/REC AMP
PLAYBACK GAIN ADJ. (L ch, DECK 1)
PLAYBACK GAIN ADJ. (L ch, DECK 2)
PLAYBACK GAIN ADJ. (R ch, DECK 1)
PLAYBACK GAIN ADJ. (R ch, DECK 2)
DECK 1
PLAYBACK HEAD
DECK 2
R/P HEAD
ERASE HEAD
CP1
CP2
Q3,4 2SJ164PQRTA SWITCHING (PLAY: ON)
Q3
Q4
VCA
VREF
MODE SW
VCA CONTROL
BUF
P.B AMP
REC AMP
REC MUTE
CUE REV MODE
LINE P.B MUTE
CH2 BUFF.
(L ch) OVERALL FREQUENCY RESPONSE (R ch)
DECK2 ERASE CURRENT ADJ. TEST POINT
TP1
TP2
TP3
TP11
TP12
L301
Q301,302 2SC3311AQSTA BIAS OSC CONTROL
Q303 2SB621ARSTA BIAS OSC CONTROL
Q304 2SD592QRSTA BIAS OSC CONTROL
Q904 2SB1030RSTTA BIAS OSC CONTROL
ERASE CURRENT ADJ.
Q5,6 2SA1309AQSTA SWITCHING (X2, 70/120μs)
Q7,8 2SA1309AQSTA SWITCHING (METAL/CrO2)
Q911,918 2SA1309AQSTA MOTOR SPEED CONTROL
Power Supply For (EG) area.
AC OUTLET (UNSWITCHED)
T601
F601 T2A
AC 220V (50/60Hz)
JK6
CN601
CN603
CN606
CN607
CN608
(EG, GN) only
To AMPLIFIER (POWER SUPPLY)
For others.
Except (EG)
JK8
TP601
TP602
TP603
Q601 2SA1309AQSTA STABILIZER
Q603 2SC3311AQSTA STABILIZER
Q604 2SD2037EFTA REGULATOR
Q605 2SB1357EFTA REGULATOR
Q606 2SD592QRSTA REGULATOR
Q922 DTC114ESTP SWITCHING
Q914,916 2SB1030RSTTA SOLENOID DRIVE
Q915,917 DTC114ESTP SOLENOID DRIVE
Q910,919 DTC114ESTP MOTOR SPEED CONTROL
TAPE SPEED ADJ. (X1, DECK 2)
(EG, GN) only


7
8
9
10
11
12
13
14
15
16
IC2
AN7351K
PLAYBACK/REC AMP
PLAYBACK GAIN ADJ. (L ch, DECK 2)
PLAYBACK GAIN ADJ. (R ch, DECK 1)
PLAYBACK GAIN ADJ. (R ch, DECK 2)
OVERALL GAIN ADJ. (L ch)
OVERALL GAIN ADJ. (R ch)
REC AMP
REC MUTE
LINE P.B MUTE
CUE REV MODE
CH2 BUFF.
CH1 BUFF.
SPEED
Q905
2SC3311AQSTA
SWITCHING (RESET)
0.2V/5ms. div.
0.3V P-P
X901
IC901
M50746-166SP
MICROCOMPUTER
TEST TERMINAL
TEST
D916 MA165TA
Q9,10
2SC3311AQSTA
SWITCHING
(X2, 70/120 μs)
Q11~14
2SC3311AQSTA
SWITCHING
(METAL/CrO2)
Q7,8
2SA1309AQSTA
SWITCHING (METAL/CrO2)
Q911,918
2SA1309AQSTA
MOTOR SPEED CONTROL
Q912,920
2SB621ARSTA
MOTOR DRIVE
Q914,916
2SB1030RSTTA
SOLENOID DRIVE
Q910,919
DTC114ESTP
MOTOR SPEED CONTROL
Q915,917
DTC114ESTP
SOLENOID DRIVE
Q913,921
DTC114ESTP
MOTOR DRIVE
TAPE SPEED ADJ. (X2, DECK 1)
TAPE SPEED ADJ. (X1, DECK 2)
TAPE SPEED ADJ. (X1, DECK 1)
Q906
DTC124ESTP
SWITCHING
(CD EDIT)
Q907
2SA1309AQSTA
SWITCHING
(REMOTE)
Q903
DTA114ESTP
SWITCHING (X2)
Q17,924,925,926
DTA114ESTP
SWITCHING
Q902,909
DTA114ESTP
SWITCHING
(ENCODE/DECODE, DOLBY)
D401 MA165TA
D910 MA165TA
D913 MA165TA
D908 1SR35200TB
D909 MA165TA
"dolby on" : 0V
CN3
J971
CN4
CN5
J951
CN6
CN9A
W9
CN9B
S976 (ATS/METAL)
S974 (F. REC INH.)
S975 (ATS/CrO2)
S973 (R. REC INH.)
S972 (HALF)
S971 (MODE)
SOLENOID
D971 1SS133
IC971
DN6851A
HALL IC
MOTOR (DECK 2)
S953 (ATS/CrO2)
S952 (HALF)
S951 (MODE)
SOLENOID
D951 1SS133
IC951
DN6851A
HALL IC
MOTOR (DECK 1)
S725
(DECK) For (E,EB,GC,GN) areas.
(POWER) For (EG) area.
VR1 100K(B)
(REC LEVEL)
S706
(REVERSE MODE)
R710 12K
R711 22K
R712 68K
B MECHANISM (DECK 2) CIRCUIT
C MECHANISM (DECK 1) CIRCUIT
D POWER SWITCH/REC LEVEL CIRCUIT

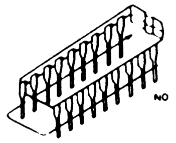

Q401,403
2SC3311AQSTA
MPX CONTROL
Q401
Q403
L401
C405 1200P
R409 680K
C407 1500P
R411 680K
R407 2.4K
Q15,16
2SD1450RSTTA
MUTING
C401 50V2.2
Q15
Q16
R66 6.8K
R408 2.4K
L402
R410 680K
C406 1200P
C408 1500P
R412 680K
Q402
Q404
Q402,404
2SC3311AQSTA
MPX CONTROL
IC401
TEA0657
DOLBY NR
R413 5.6K
R417 3.3K
C409 4700P
R415 47K
C411 0.033
R419 1K
C413 0.047
C415 50V0.33
C417 0.1
R423 180K
R421 270K
R403 10K
C403 25V4.7
R425 10K
0V:Dolby "on"
REF
R/P
NR OFF
GND
VDD
IC401
C402 50V2.2
C414 0.047
C416 50V0.33
C418 0.1
R424 180K
R422 270K
R416 47K
C412 0.033
C410 4700P
R418 3.3K
R404 10K
C404 25V4.7
R420 1K
R414 5.6K
Q405
Q405
2SA1309AQSTA
SWITCHING
(R/P SELECT)
R902 47K
R615 68
C610 6.3V220
R616 68
C611 6.3V220
R406 18K
R405 18K
C49 16V10
C50 16V10
R13 3.3K
R14 3.3K
R11 560
R12 560
TP5
TP6
TP7
L ch
R ch
JK1-2
LINE OUT
JK3
CONTROL (TO AMP)
R923 1K
R926 1K
TP8
TP9
R946 1K
R947 1K
JK4
IN
REMOTE CONTROL
OUT
JK5
D914 MA4051M1A
C909 0.01
R929 2.7K
TP10
D921 MA165TA
R71 4.3K
R72 4.3K
CN10
C23 50V1
C24 50V1
R69 15K
R70 15K
a1 a2 a3 a4 a5 a6 a7
CN7
CN8B
CN8A
q u b o j l s r t h f c n m k p d a g e i
5.8V
5.5V
7.6V
11.8V
7.8V
4.9V (7.7V)
5.5V (-5.8V)
-3.8V (0.6V)

E OPERATION SWITCH/LED METER CIRCUIT

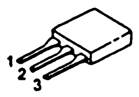

W10
a1 a2 a3 a4 a5 a6 a7
R504 56
C503 0.01
IC501
COMPARATOR
IC501
AN6888
LED METER DRIVE
R503 5.6K
R501 100K
C501 50V2.2
AZ501-1
LED BLOCK
D528 D526 D524 D522 D520
(+6) (+3) (0) (-5) (-10)
D520,522,524,526,528
LN846RP-LS
Q502~506
DTA114ESTP
LED DRIVE
c d a f g
Q502 Q503 Q504 Q505 Q506
R506 390
R507 390
R508 390
R509 390
R510 390
D501 (REMOTE CONTROL DECK 1)
D502 (REMOTE CONTROL DECK 2)
D503 (REC DECK 2)
D504 (PLAY DECK 1)
D505 (PLAY DECK 2)
Q514
DTA114ESTP
LED DRIVE
n k m e
Q514
R516 390
R514 390
R515 390
R518 390
R519 390
D511 (DOLBY NR)
D509 (EDIT X1)
D510 (EDIT X2)
D513 (DIRECTION DECK 2)
D514 (DIRECTION DECK 2)
D515 MA165TA
D516 MA165TA
AZ501-2
LED BLOCK
D509,510
LN846RP-LS
D501,502,504,505,511,513,514
LN346GP-C
W7
f c n m k
DECK 1
R701 820
R702 1K
R703 1.2K
R704 1.5K
R705 1.8K
R706 15K
R707 1K
R708 1K
S701 (■ STOP)
S702 (▶▶ FF)
S703 (◀◀ REW)
S704 (▶ PLAY)
W8
d a g e
DECK 2
R713 820
R714 1K
R715 1.2K
R716 1.5K
R717 1.8K
R718 2.2K
R719 3.3K
R720 4.7K
R721 6.8K
R722 12K
R723 22K
S708 (AUTO REC MUTE)
S711 (■ STOP)
S712 (▶▶ CUE/REVIEW)
S713 (◀◀ CUE/REVIEW)
S714 (◀ PLAY)
S715 (▶ PLAY)
S716 (● REC)
S717 (PAUSE)
S718 (SYNCHRO START)
S719 (EDIT SPEED X2)
S720 (EDIT SPEED X1)
S722 (DOLBY NR)
7.6V
7.8V
11.8V


21
22
23
24
25
26
27
28
E OPERATION SWITCH/LED METER CIRCUIT
C49 16V10
TP5
R13 3.3K
R11 560
L ch
JK1-2 LINE OUT
C50 16V10
R12 560
R14 3.3K
R ch
TP6
TP7
R923 1K
JK3
R926 1K
TP8
CONTROL (TO AMP)
R946 1K
R947 1K
TP9
JK4
R929 2.7K
C909 0.01
D914 MA4051MTA
TP10
D921 MA165TA
IN
REMOTE CONTROL
JK5
OUT
R71 43K
R72 43K
CN10
C23 50V1
R69 15K
C24 50V1
R70 15K
⟨7.6V⟩
⟨11.8V⟩
⟨7.8V⟩
a1
a2
a3
a4
a5
a6
a7
W10
R504 56
C503 0.01
IC501
COMPARATOR
0V
7.6V
2.0V
10.6V
8.6V (9V)
9.9V (10.4V)
2.5V
R503 5.6K
R501 100K
C501 50V2.2
AZ501-1 LED BLOCK
D528
D526
D524
D522
D520
(+6)
(+3)
(0)
(−5)
(−10)
D520,522,524,526,528 LN846RP-LS
IC501 AN6888 LED METER DRIVE
Q502~506 DTA114ESTP LED DRIVE
Q502
Q503
Q504
Q505
Q506
c
d
a
f
g
R506 390
R507 390
R508 390
R509 390
R510 390
D501 (REMOTE CONTROL DECK 1)
D502 (REMOTE CONTROL DECK 2)
D503 LN846RP-C (REC DECK 2)
D504 (PLAY DECK 1)
D505 (PLAY DECK 2)
Q514 DTA114ESTP LED DRIVE
Q514
n
k
m
e
R516 390
R514 390
R515 390
D511 (DOLBY NR)
D509 (EDIT X1)
D510 (EDIT X2)
AZ501-2 LED BLOCK
D509,510 LN846RP-LS
D501,502,504,505,511,513,514 LN346GP-C
R518 390
D513 (▷DIRECTION DECK 2)
D515 MA165TA
D516 MA165TA
D514 (◁DIRECTION DECK 2)
R519 330
R615 68
63V220
R616 68
CN7
W7
DECK 1
R701 820
R702 1K
R703 1.2K
R704 1.5K
R705 1.8K
R706 15K
R707 1K
R708 1K
S701 (■STOP)
S702 (▶▶FF)
S703 (◀◀REW)
S704 (▶PLAY)
CN8B
W8
CN8A
DECK 2
R713 820
R714 1K
R715 1.2K
R716 1.5K
R717 1.8K
R718 2.2K
R719 3.3K
R720 4.7K
R721 6.8K
R722 12K
R723 22K
S708 (● AUTO REC MUTE)
S711 (■STOP)
S712 (▶▶CUE/REVIEW)
S713 (◀◀CUE/REVIEW)
S714 (▶PLAY)
S715 (◀PLAY)
S716 (●REC)
S717 (❚❚PAUSE)
S718 (SYNCHRO START)
S719 (EDIT SPEED X2)
S720 (EDIT SPEED X1)
S722 (DOLBY NR)
q u b o j l s r f h f c n m k p d a g e i

TERMINAL GUIDE OF IC's, TRANSISTORS AND DIODES

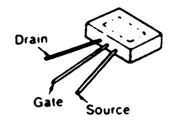


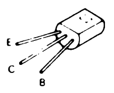
AN7384	16 Pin	AN7351K	42 Pin
AN6888	18 Pin	M50746-166SP	64 Pin
TEA0657	24 Pin		



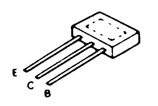
DN6851A	3 Pin

2SJ164PQRTA


Drain
Gate
Source

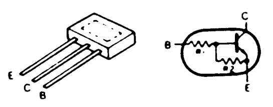


2SB621ARSTA
2SD592QRSTA

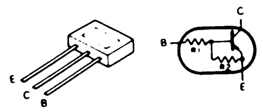


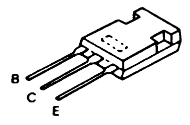
2SA1309AQSTA
2SC3311AQSTA
2SD1450RSTTA
2SB1030RSTTA

DTC114ESTP

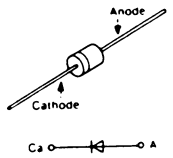


DTA114ESTP

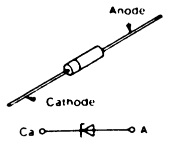




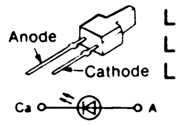
2SB1357DEFTA
2SD2037EFTA


Anode
Cathode
Ca
A

MA167TA
MA165TA
1SR35200TB
1SS133

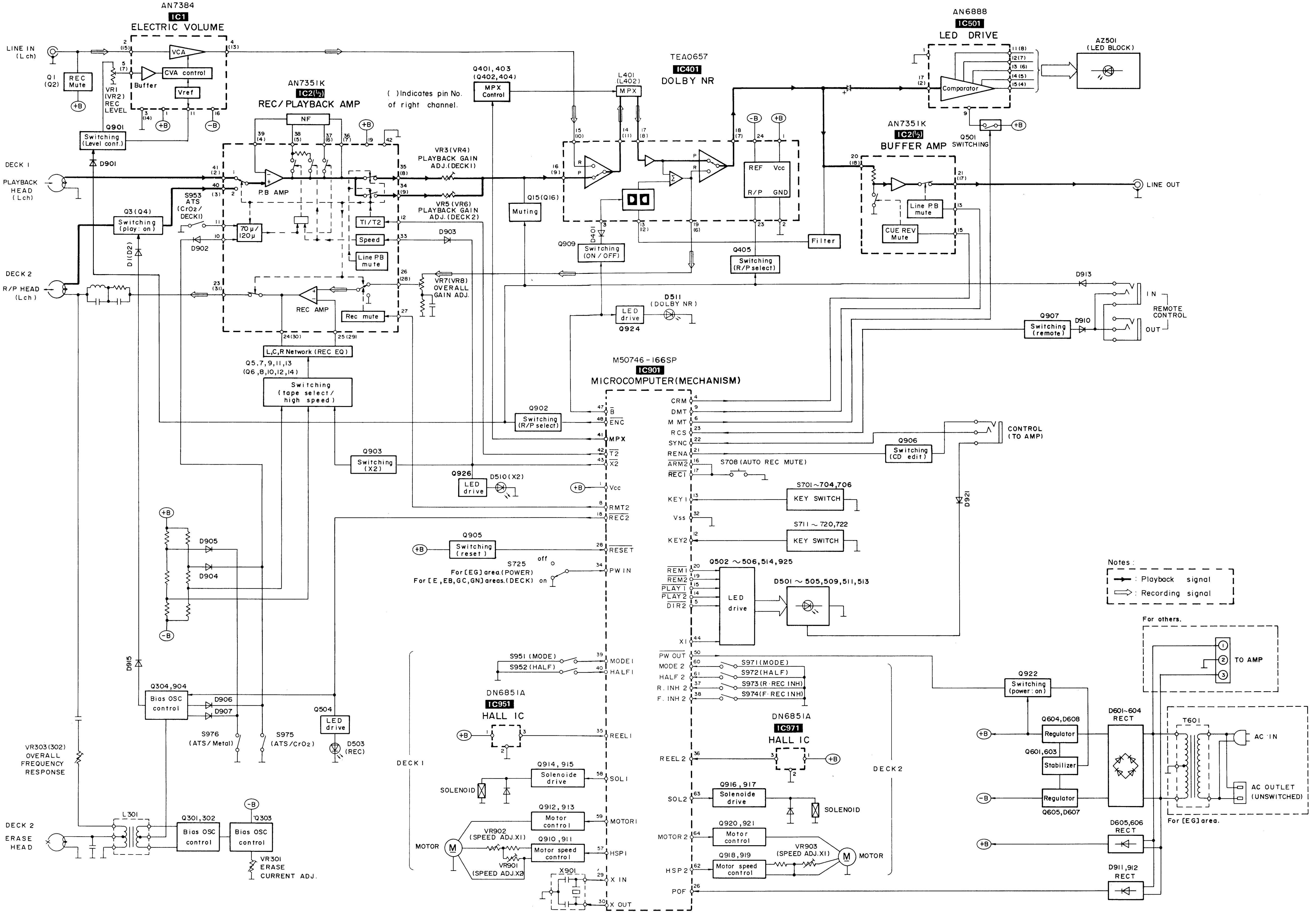

Anode
Cathode
Ca
A

MA4062LTA
MA4082MTA
MA4051MTA

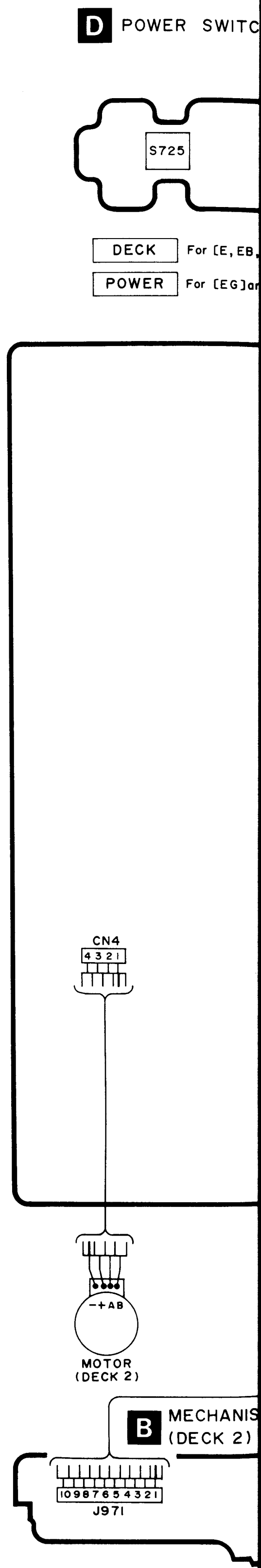

Anode
Cathode
Ca
A

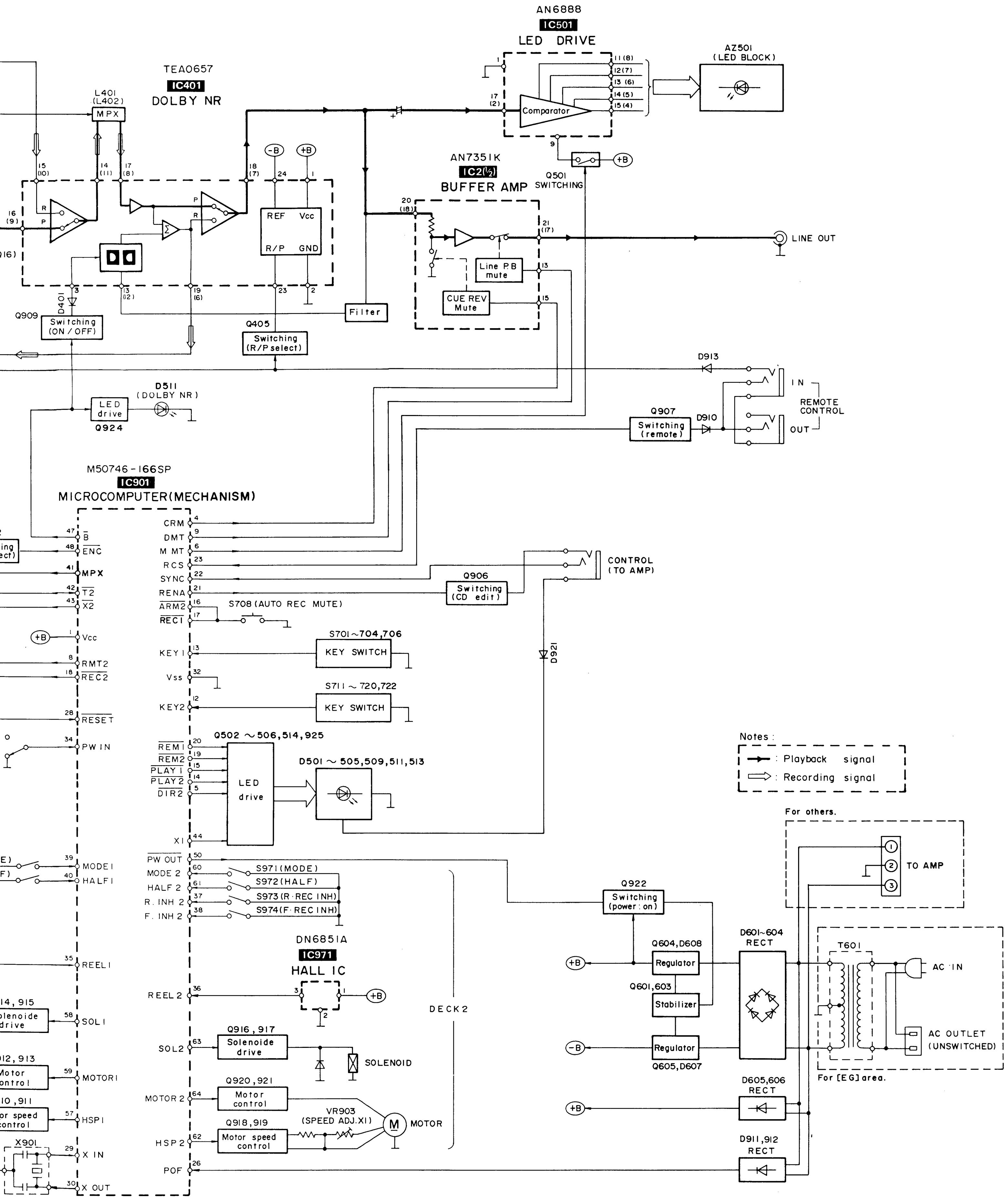
LN346GP-C (GREEN)
LN846RP-C (ORANGE)
LN846RP-LS (ORANGE)

BLOCK DIAGRAM

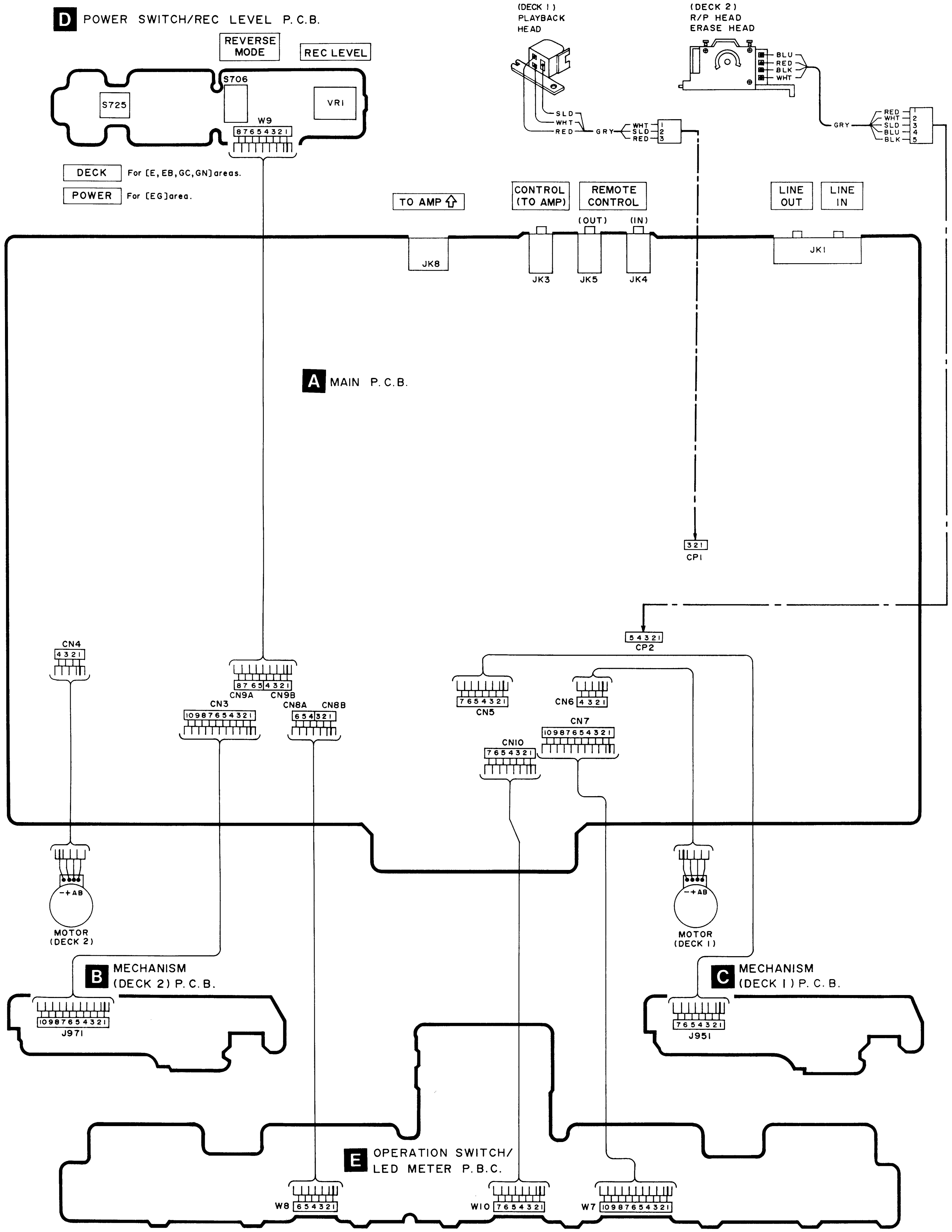

AN7384
IC1
ELECTRIC VOLUME
VCA
CVA control
Buffer
Vref
LINE IN (L ch)
Q1 (Q2)
REC Mute
+B
VR1 (VR2) REC LEVEL
Q901
Switching (Level cont.)
D901
AN7351K
IC2(½)
REC/PLAYBACK AMP
NF
( )Indicates pin No. of right channel.
P.B AMP
DECK 1
PLAYBACK HEAD (L ch)
S953 ATS (CrO2/DECK1)
Q3(Q4)
Switching (play: on)
70μ/120μ
D902
D1(D2)
T1/T2
Speed
Line P.B mute
VR3(VR4) PLAYBACK GAIN ADJ.(DECK1)
VR5(VR6) PLAYBACK GAIN ADJ.(DECK2)
D903
DECK 2
R/P HEAD (L ch)
REC AMP
Rec mute
VR7(VR8) OVERALL GAIN ADJ.
L,C,R Network (REC EQ)
Q5,7,9,11,13 (Q6,8,10,12,14)
Switching (tape select/high speed)
Q401,403 (Q402,404)
MPX Control
L401 (L402)
MPX
TEA0657
IC401
DOLBY NR
Q15(Q16)
Muting
REF Vcc
R/P GND
D401
Q909
Switching (ON/OFF)
Q405
Switching (R/P select)
Filter
D511 (DOLBY NR)
LED drive
Q924
AN6888
IC501
LED DRIVE
Comparator
AZ501 (LED BLOCK)
Q501 SWITCHING
AN7351K
IC2(½)
BUFFER AMP
Line P.B mute
CUE REV Mute
LINE OUT
D913
D910
Q907
Switching (remote)
IN
OUT
REMOTE CONTROL
M50746-166SP
IC901
MICROCOMPUTER(MECHANISM)
Q902
Switching (R/P select)
B̄
ENC
MPX
T2
X2
Vcc
RMT2
REC2
RESET
PW IN
Q903
Switching (X2)
Q926
LED drive
D510(X2)
Q905
Switching (reset)
S725
For [EG] area (POWER)
For [E,EB,GC,GN] areas (DECK)
off
on
CRM
DMT
M MT
RCS
SYNC
RENA
ARM2
REC1
KEY1
Vss
KEY2
S708 (AUTO REC MUTE)
Q906
Switching (CD edit)
CONTROL (TO AMP)
S701~704,706
KEY SWITCH
S711~720,722
KEY SWITCH
D921
Q502~506,514,925
REM1
REM2
PLAY1
PLAY2
DIR2
X1
LED drive
D501~505,509,511,513
+B
-B
D905
D904
D915
Q304,904
Bias OSC control
D906
D907
S976 (ATS/Metal)
S975 (ATS/CrO2)
Q504
LED drive
D503 (REC)
VR303(302) OVERALL FREQUENCY RESPONSE
DECK 2 ERASE HEAD
L301
Q301,302
Bias OSC control
Q303
Bias OSC control
VR301 ERASE CURRENT ADJ.
DECK1
S951 (MODE)
S952 (HALF)
MODE1
HALF1
DN6851A
IC951
HALL IC
REEL1
Q914,915
Solenoide drive
SOLENOID
SOL1
Q912,913
Motor control
MOTOR1
MOTOR
VR902 (SPEED ADJ.X1)
Q910,911
Motor speed control
VR901 (SPEED ADJ.X2)
HSP1
X901
X IN
X OUT
PW OUT
MODE 2
HALF 2
R. INH 2
F. INH 2
S971(MODE)
S972(HALF)
S973(R·REC INH)
S974(F·REC INH)
DN6851A
IC971
HALL IC
REEL 2
SOL2
Q916,917
Solenoide drive
SOLENOID
MOTOR 2
Q920,921
Motor control
HSP2
Q918,919
Motor speed control
VR903 (SPEED ADJ.X1)
MOTOR
POF
DECK2
Notes:
→ : Playback signal
⇨ : Recording signal
For others.
TO AMP
Q922
Switching (power: on)
Q604,D608
Regulator
Q601,603
Stabilizer
Regulator
Q605,D607
D601~604 RECT
T601
AC IN
AC OUTLET (UNSWITCHED)
For [EG] area.
D605,606 RECT
D911,912 RECT

WIRING C


D
POWER SWITC
S725
DECK For [E, EB,
POWER For [EG] ar
CN4
4321
MOTOR (DECK 2)
B
MECHANIS (DECK 2)
10987654321
J971


AN6888
IC501
LED DRIVE
Comparator
AZ501 (LED BLOCK)
TEA0657
IC401
DOLBY NR
L401 (L402)
MPX
REF
Vcc
R/P
GND
AN7351K
IC2(½)
BUFFER AMP
Q501 SWITCHING
LINE OUT
Line PB mute
CUE REV Mute
Filter
Q909
Switching (ON / OFF)
D401
Q405
Switching (R/P select)
D913
IN
REMOTE CONTROL
OUT
Q907
Switching (remote)
D910
D511 (DOLBY NR)
LED drive
Q924
M50746-166SP
IC901
MICROCOMPUTER(MECHANISM)
B
ENC
MPX
T2
X2
Vcc
RMT2
REC2
RESET
PW IN
MODE1
HALF1
REEL1
SOL1
MOTOR1
HSP1
X IN
X OUT
X901
CRM
DMT
M MT
RCS
SYNC
RENA
ARM2
REC1
KEY1
Vss
KEY2
REM1
REM2
PLAY1
PLAY2
DIR2
X1
PW OUT
MODE 2
HALF 2
R. INH 2
F. INH 2
REEL 2
SOL2
MOTOR 2
HSP2
POF
CONTROL (TO AMP)
Q906
Switching (CD edit)
S708 (AUTO REC MUTE)
S701~704,706
KEY SWITCH
S711~720,722
KEY SWITCH
Q502~506,514,925
LED drive
D501~505,509,511,513
D921
Notes :
: Playback signal
: Recording signal
For others.
TO AMP
S971(MODE)
S972(HALF)
S973(R·REC INH)
S974(F·REC INH)
DECK2
DN6851A
IC971
HALL IC
Q922
Switching (power : on)
Q604,D608
Regulator
Q601,603
Stabilizer
Regulator
Q605,D607
D601~604 RECT
T601
AC IN
AC OUTLET (UNSWITCHED)
For [EG] area.
D605,606 RECT
D911,912 RECT
Q916,917
Solenoide drive
SOLENOID
Q920,921
Motor control
VR903 (SPEED ADJ.X1)
MOTOR
Q918,919
Motor speed control
+B
−B

WIRING CONNECTION DIAGRAM

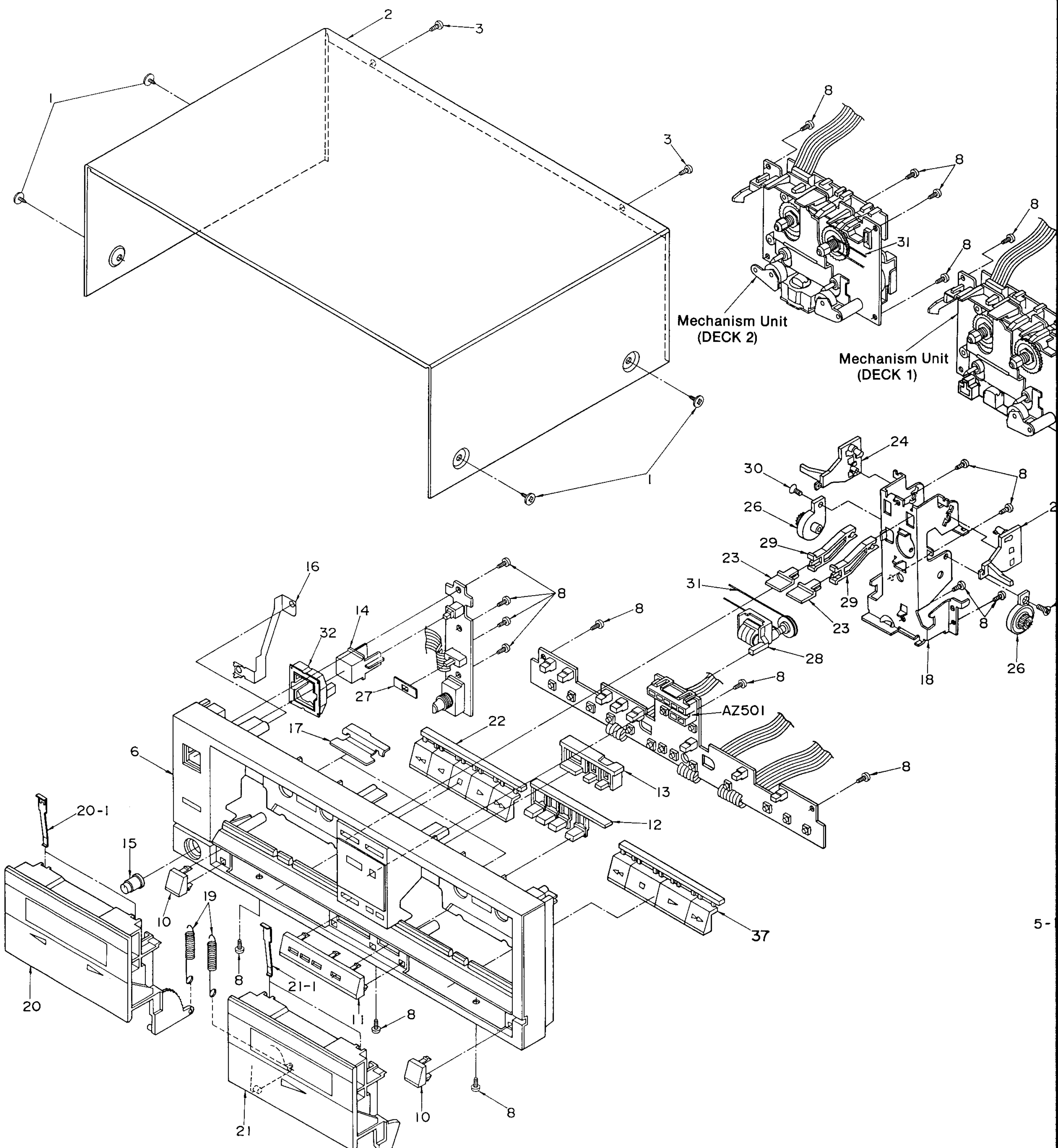

D POWER SWITCH/REC LEVEL P.C.B.
REVERSE MODE
REC LEVEL
S706
S725
VR1
W9
DECK For [E,EB,GC,GN] areas.
POWER For [EG] area.
(DECK 1) PLAYBACK HEAD
(DECK 2) R/P HEAD ERASE HEAD
BLU
RED
BLK
WHT
SLD
GRY
TO AMP
CONTROL (TO AMP)
REMOTE CONTROL
(OUT)
(IN)
LINE OUT
LINE IN
JK8
JK3
JK5
JK4
JK1
A MAIN P.C.B.
CP1
CP2
CN4
CN9A
CN9B
CN3
CN8A
CN8B
CN5
CN6
CN7
CN10
MOTOR (DECK 2)
MOTOR (DECK 1)
B MECHANISM (DECK 2) P.C.B.
J971
C MECHANISM (DECK 1) P.C.B.
J951
E OPERATION SWITCH/ LED METER P.B.C.
W8
W10
W7

REPLACEMENT PARTS LIST

Notes : * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	RHD30007	SCREW	
2	RKM0024-2K	CABINET	
3	XTBS3+8JFZ1	SCREW	
4	RGR0014A-E	REAR PANEL	(E, EB, GC, GN)
4	RGR0014B-C	REAR PANEL	(EG)
5	RFKJSX301E-K	BOTTOM BOARD ASS'Y	
5-1	RKA0011	FOOT	
6	RFKGSX101EK	FRONT PANEL ASS'Y	(E, EB, GC, GN)
6	RFKGSX101EGK	FRONT PANEL ASS'Y	(EG)
7	SHE187-2	HOLDER	
8	XTB3+10JFZ	SCREW	
9	XTB3+20JFZ	SCREW	
10	RGK0073	ORNAMENT, BUTTON (B)	
11	RGK0072	ORNAMENT, BUTTON (A)	
12	RGU0183	BUTTON ASS'Y, DOLBY	
13	RGU0089	BUTTON, EDIT	
14	RGU0090	BUTTON, POWER	
15	RGW0015	KNOB, REC LEVEL	
16	RJR0015	GND PLATE	
17	RMA0052-1	BRACKET	
18	RMA0064-2	EJECT BRACKET	
19	RMB0042-2	EJECT SPRING	
20	RYF0067	CASSETTE HOLDER (DECK2)	
20-1	QBP2006A	SPRING, TAPE PRESSURE	
21	RYF0068	CASSETTE HOLDER (DECK1)	
21-1	QBP2006A	SPRING, TAPE PRESSURE	
22	SBCF13A	BUTTON, OPERATION (DECK2)	
23	SBC928	BUTTON, EJECT	
24	SHEF1	EJECT LEVER (L)	
25	SHEF2-1	EJECT LEVER (R)	
26	SMQSX911-KE	DAMPER GEAR ASS'Y	
27	SHR6076	ORNAMENT	
28	SJN29	TAPE COUNTER	
29	SUBF3	EJECT ROD	
30	XTS3+8J	SCREW	
31	SMQ20024	COUNTER BELT	
32	RMR0109	BUTTON GUIDE	
33	XTBS3+8JFZ1	SCREW	(EG)
34	RJS1A4902-A	AC OUTLET COVER	(EG)
35	RJS1A4902-B	AC OUTLET	(EG) ⚠
36	XTBS3+8JFZ1	SCREW	(E, EB, GC, GN)
37	SBCF12A-1	BUTTON, OPERATION (DECK1)	
		PACKING MATERIAL	
P1	RPG0462	CARTON BOX	
P2	RPN0333A	RAD (A)	
P3	RPN0333B	RAD (B)	
P4	RPN0333C	PAD (C)	
P5	RPN0333D	PAD (D)	
P6	SPSD152	PAD, ACCESSORIES	
P7	SPP753	PROTECTION COVER	
		ACCESSORIES	
A1	RQF0576	INSTRUCTION MANUAL	(EB)
A1	RQF0577	INSTRUCTION MANUAL	(E)
A1	RQF0578	INSTRUCTION MANUAL	(EG)
A1	RQF0579	INSTRUCTION MANUAL	(GC)
A1	RQF0580	INSTRUCTION MANUAL	(GN)
A1-1	RFKSUX101E-K	INSTRUCTION MANUAL ASS'Y	(E)
A1-1	RQT0484-B	INSTRUCTION MANUAL	(EB, GN)
A1-1	RQT0485-G	INSTRUCTION MANUAL	(GC)
A1-1	RQT0497-D	INSTRUCTION MANUAL	(EG)
A1-2	RQA0013	WARRANTY CARD	(E, EG)
A1-2	SQX7186	WARRANTY CARD	(GN)
A1-3	RQCB0169	SERVICENTER LIST	(E, EG, GC, GN)
A1-4	RQCS0009	CAUTION NOTE (FTZ)	(EG)
A2	SFDAC05E03	POWER CORD	(EG) ⚠
A3	SJP2249-3	STEREO CONNECTION CABLE	
A4	SJP2257T	L-TYPE CABLE	
A5	REX0036	FLAT CABLE (TO AMPLIFIER)	(E, EB, GC, GN)

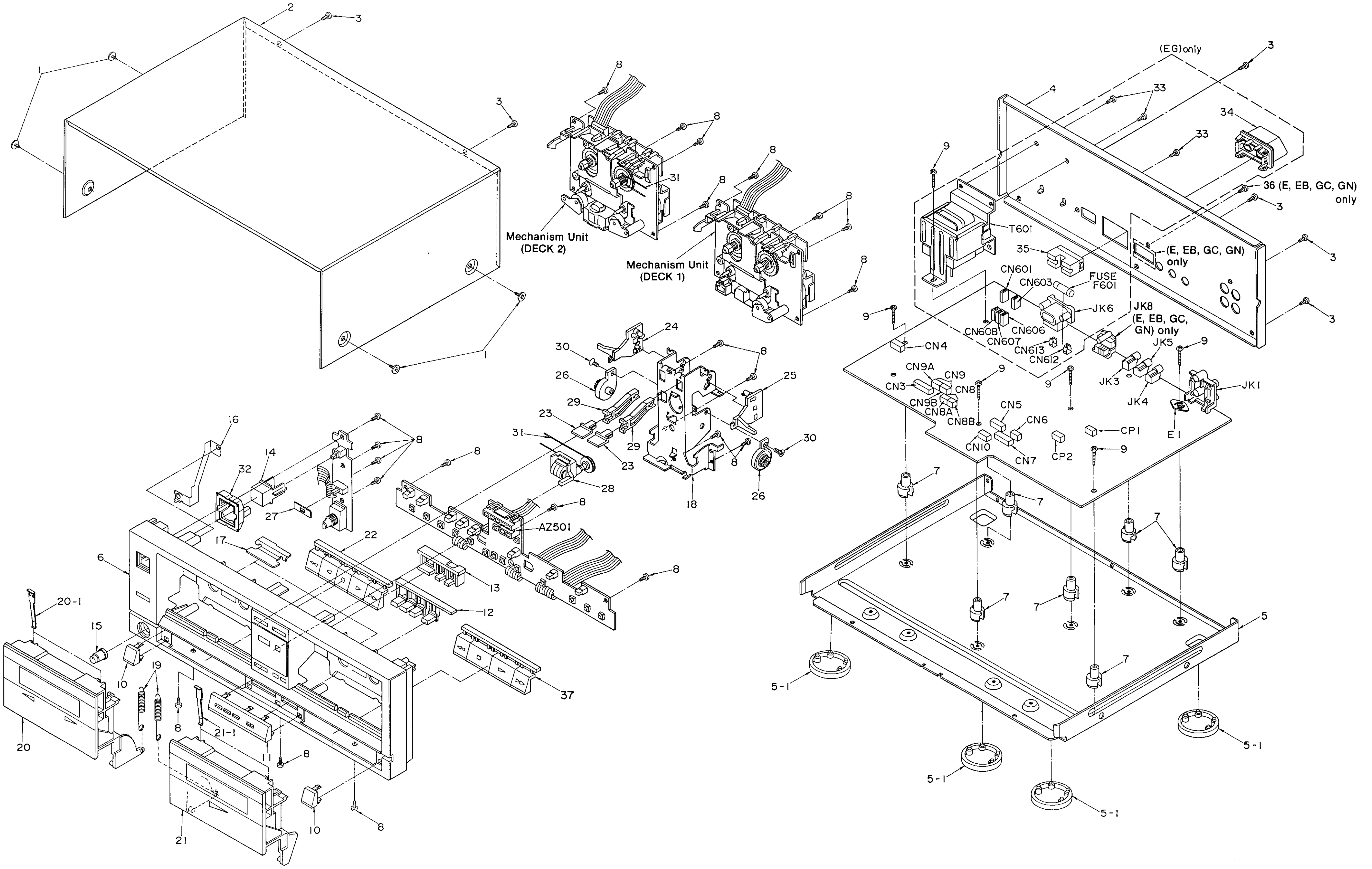
CABINET PARTS LOCATION



ng any of these
e for area.)

n	Remarks
	(EB)
	(E)
	(EG)
	(GC)
	(GN)
	(E)
	(EB, GN)
	(GC)
	(EG)
	(E, EG)
	(GN)
	(E, EG, GC, GN)
	(EG)
	(EG) ⚠
	(E, EB, GC, GN)

CABINET PARTS LOCATION


1
2
3
Mechanism Unit (DECK 2)
Mechanism Unit (DECK 1)
8
31
24
30
26
29
23
25
18
28
AZ501
16
14
32
27
17
22
13
12
6
20-1
15
10
19
20
21
21-1
11
37
4
33
34
(EG)only
36 (E, EB, GC, GN) only
9
T601
35
(E, EB, GC, GN) only
FUSE F601
CN601
CN603
CN606
CN608
CN607
CN613
CN612
JK6
JK8 (E, EB, GC, GN) only
JK5
JK3
JK4
JK1
E1
CN4
CN9A
CN9
CN3
CN8
CN9B
CN8A
CN8B
CN5
CN6
CN10
CN7
CP1
CP2
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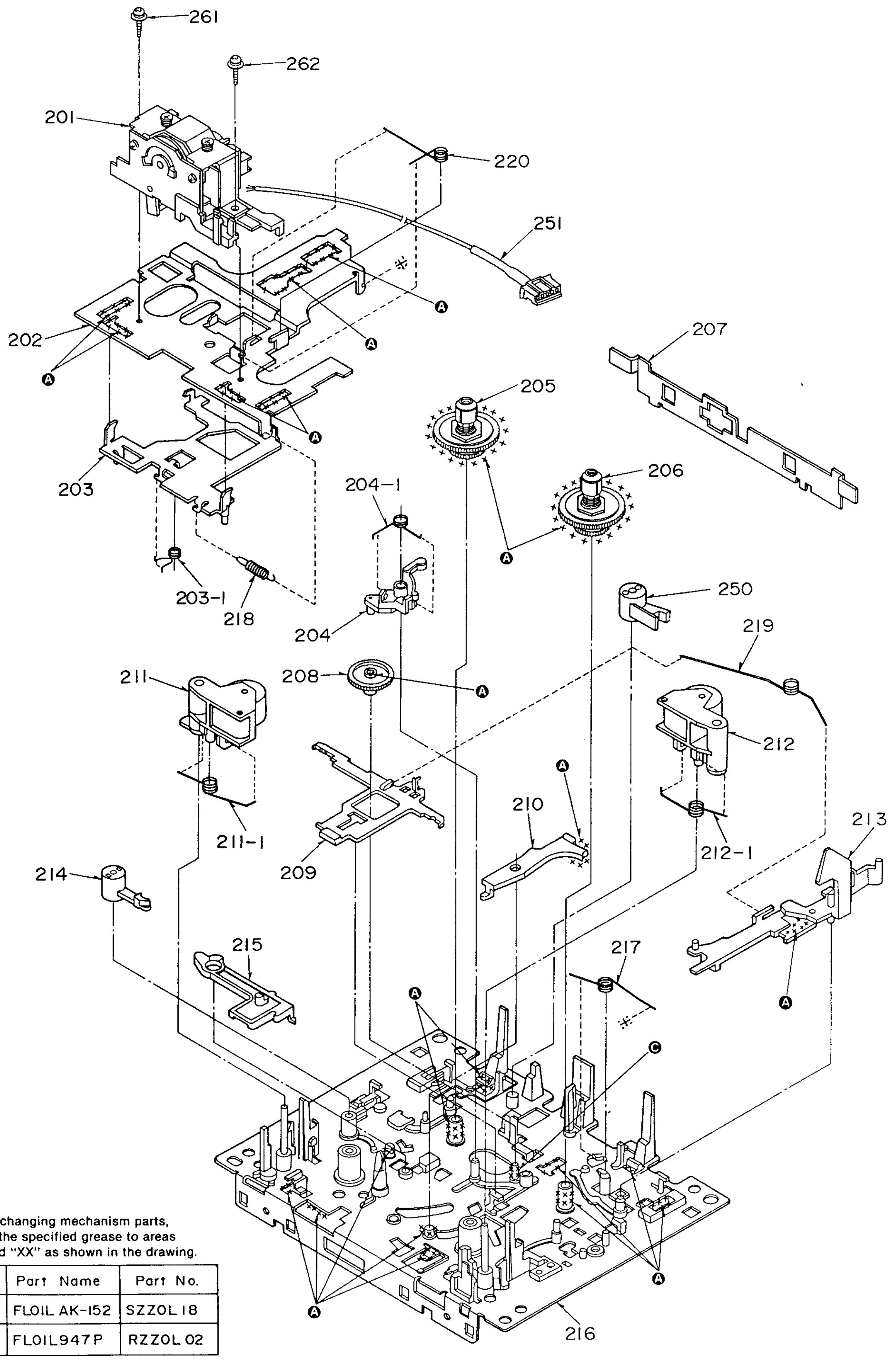
5-1

MECHANICAL PARTS LOCATION

(DECK 2: Front view)


261
262
201
220
251
202
A
203
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206
207
204-1
203-1
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250
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211
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212-1
211-1
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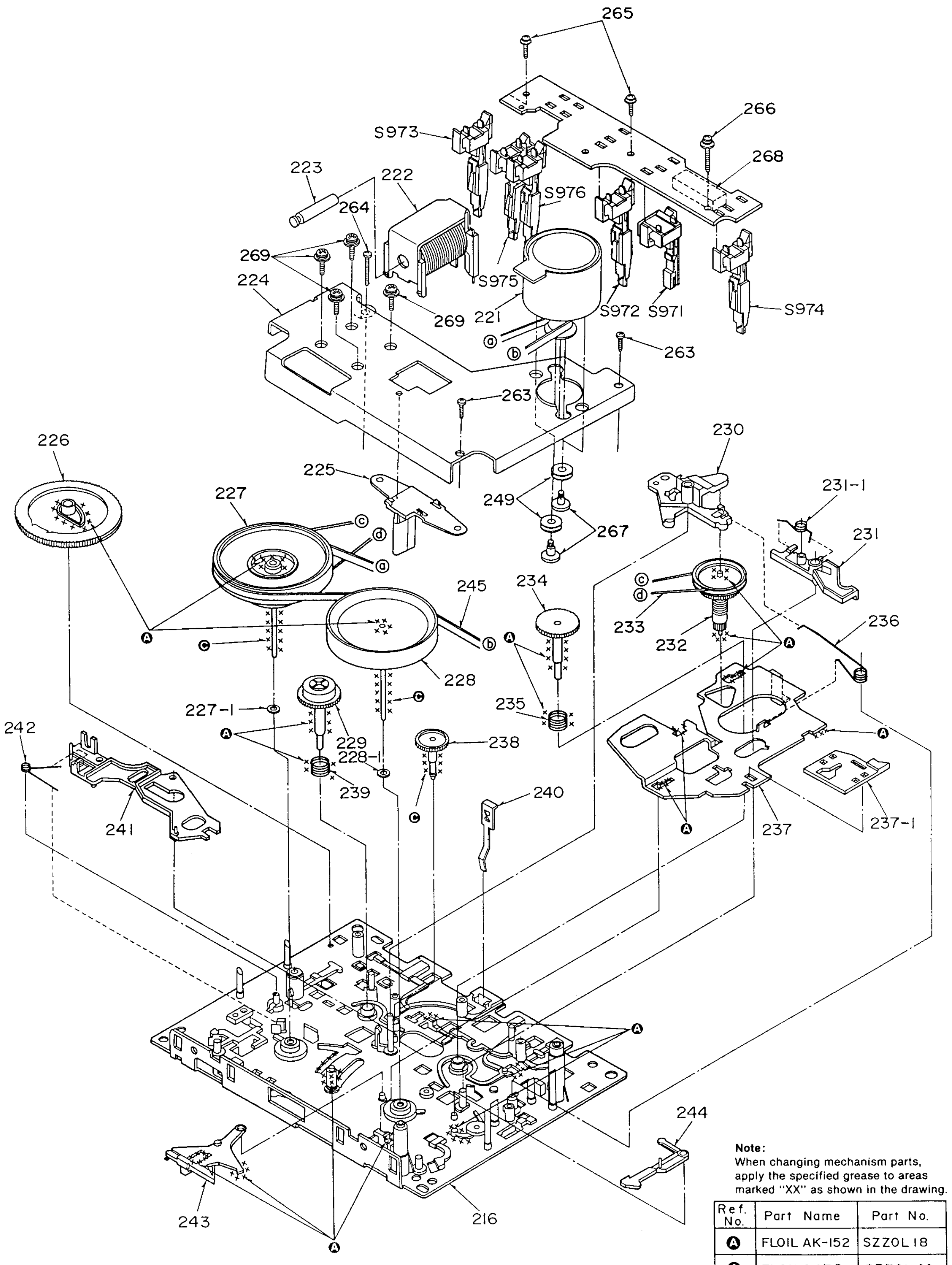
214
215
217
C
216

Note:
When changing mechanism parts, apply the specified grease to areas marked "XX" as shown in the drawing.

Ref. No.	Part Name	Part No.
Ⓐ	FLOIL AK-152	SZZOL 18
Ⓒ	FLOIL947P	RZZOL 02

(DECK 2: Rear view)


265
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S973
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S976
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269
224
S975
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S972
S971
S974
a
b
263
226
225
230
227
c
d
249
267
231-1
231
245
234
236
233
232
A
C
228
235
227-1
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238
242
228-1
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237
237-1
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216

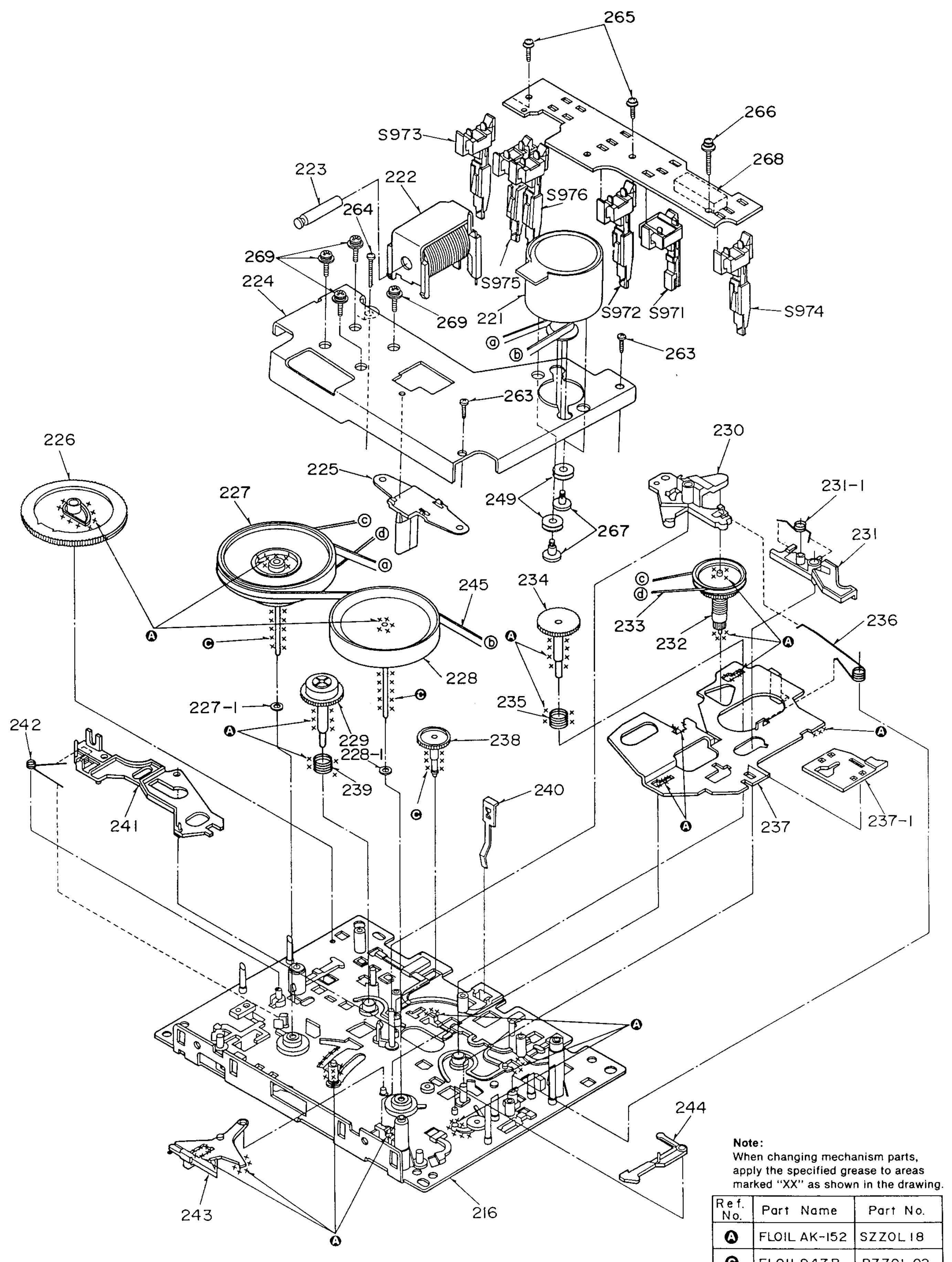
Note:
When changing mechanism parts, apply the specified grease to areas marked "XX" as shown in the drawing.

Ref. No.	Part Name	Part No.
Ⓐ	FLOIL AK-152	SZZOL 18
Ⓒ	FLOIL947P	RZZOL 02

REPLACE

Ref. No.	Part No.
DECK2	
201	RXQ0019
202	RUA793Z
203	RZLAR300
203-1	RUW143Z
204	1UB0089ZA
204-1	RUW148ZA
205	1DM0018ZA
206	1DM0017ZA
207	RUB502Z
208	RDG5772Z
209	RUB508ZA
210	RUB506Z
211	1UB0088ZA
211-1	RUW141Z
212	1UB0087ZA
212-1	RUW140Z
213	RUB507Z
214	RNL1Z
215	RUB503Z
216	RZUSX980
217	RUW142ZA
218	RUD105Z
219	RUW144ZA
220	RUW139ZA
221	RFM133ZA
222	1UE0015ZA
223	RUB428Z
224	RUL1030ZC
225	RMD5014Z
226	RDG5927ZA
227	1DW0037ZA
227-1	RNW139ZA
228	1DW0038ZA
228-1	RNW138Z
229	1DG0006ZA
230	RUB513Z
231	1UB0091ZA
231-1	RUW146ZA
232	1DR0011ZA
233	RDV90ZB
234	RDG5769ZA
235	RUQ10Z
236	RUW145ZA
237	1UB0090ZA
237-1	RUB512Z
238	RDG5773ZA
239	RUQ30Z
240	RUS609Z

(DECK 2: Rear view)



Note:
When changing mechanism parts, apply the specified grease to areas marked "XX" as shown in the drawing.

Ref. No.	Part Name	Part No.
Ⓐ	FLOIL AK-152	SZZOL18
Ⓒ	FLOIL947P	RZZOL02

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name & Description	Remarks
		MECHANISM PARTS LIST	
DECK2			
201	RXQ0019	HEAD BLOCK (REC./PLAYBACK)	
202	RUA793Z	HEAD BASE	
203	RZLAR300	ROD	
203-1	RUW143Z	SPRING	
204	1UB0089ZA	ARM	
204-1	RUW148ZA	SPRING	
205	1DM0018ZA	REEL TABLE (R)	
206	1DM0017ZA	REEL TABLE (F)	
207	RUB502Z	LEVER	
208	RDG5772Z	GEAR	
209	RUB508ZA	BRAKE ROD	
210	RUB506Z	LEVER	
211	1UB0088ZA	ARM (R)	
211-1	RUW141Z	SPRING	
212	1UB0087ZA	ARM (F)	
212-1	RUW140Z	SPRING	
213	RUB507Z	EJECT ROD (R)	
214	RNL1Z	DAMPER ARM	
215	RUB503Z	MAIN LEVER	
216	RZUSX980	CHASSIS	
217	RUW142ZA	SPRING	
218	RUD105Z	SPRING	
219	RUW144ZA	SPRING	
220	RUW139ZA	SPRING	
221	RFM133ZA	DC MOTOR	
222	1UE0015ZA	PLUNGER	
223	RUB428Z	MOVING IRON CORE	
224	RUL1030ZC	ANGLE	
225	RMD5014Z	ANGLE	
226	RDG5927ZA	GEAR	
227	1DW0037ZA	FLYWHEEL (F)	
227-1	RNW139ZA	WASHER	
228	1DW0038ZA	FLYWHEEL (R)	
228-1	RNW138Z	WASHER	
229	1DG0006ZA	REEL TABLE GEAR	
230	RUB513Z	ARM	
231	1UB0091ZA	LEVER	
231-1	RUW146ZA	SPRING	
232	1DR0011ZA	MAIN PULLEY	
233	RDV90ZB	BELT	
234	RDG5769ZA	REEL TABLE GEAR	
235	RUQ10Z	SPRING	
236	RUW145ZA	SPRING	
237	1UB0090ZA	ROD	
237-1	RUB512Z	ROD	
238	RDG5773ZA	GEAR	
239	RUQ30Z	SPRING	
240	RUS609Z	TAPE PRESSURE SPRING	

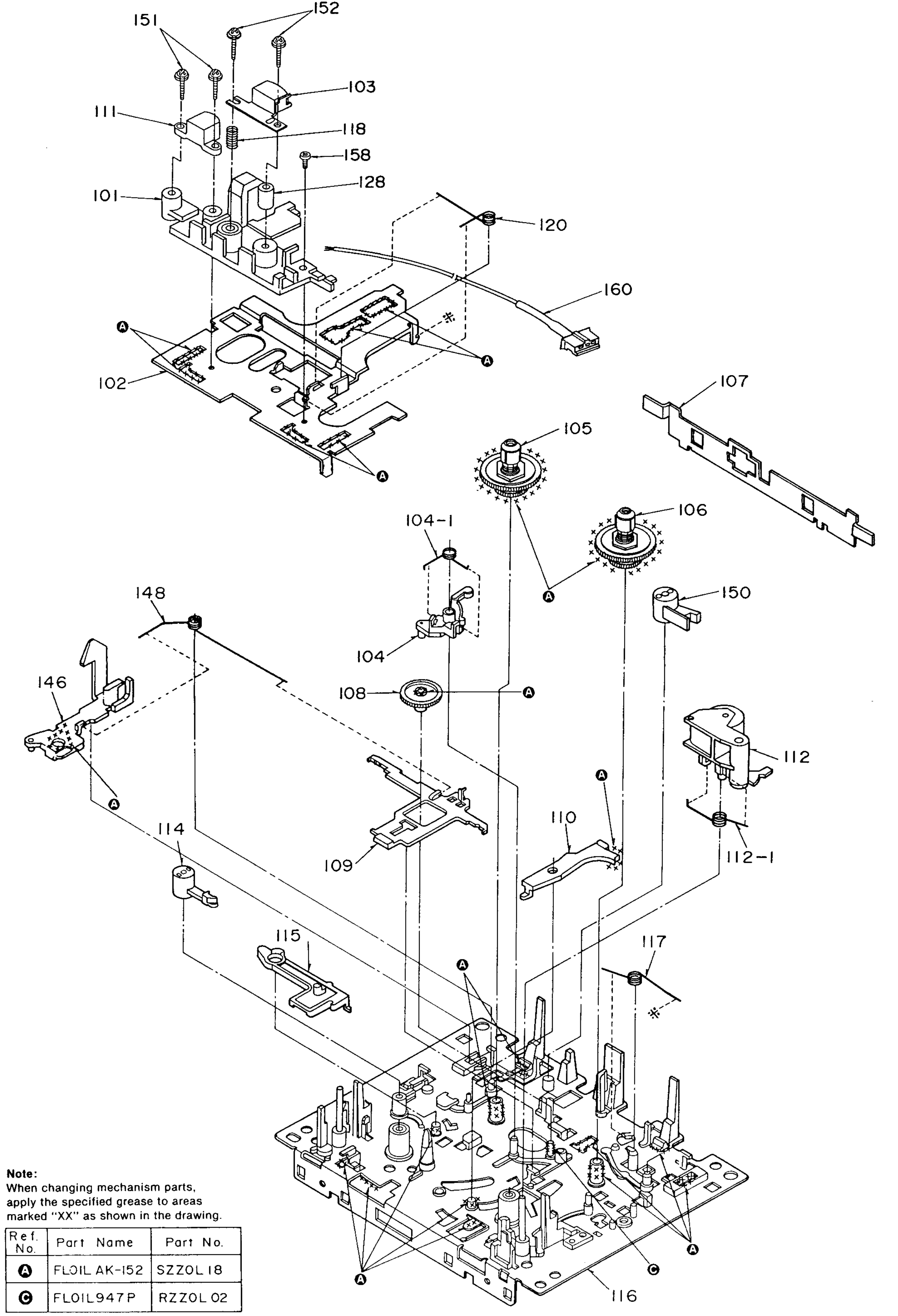
Ref. No.	Part No.	Part Name & Description	Remarks
241	RUB514Z	LEVER	
242	RUW147ZA	SPRING	
243	RUB515Z	LEVER	
244	RUB509ZA	LEVER	
245	RDV108ZA	CAPSTAN BELT	
249	RHG3032Z	RUBBER CUSHION	
250	RNL97ZA	DAMPER ARM	
251	REX0059	LEAD WIRE BLOCK	
261	XTW2+6L	SCREW	
262	XTW2+8L	SCREW	
263	XTN26+7J	SCREW	
264	XTN26+16F	SCREW	
265	XTW2+8S	SCREW	
266	XYC2+JF16	SCREW	
267	QHQ1303	SCREW	
268	RJS10T7ZA	CONNECTOR (10P), J971	
269	XYN26+F6	SCREW	

Ref. No.	Part No.	Part Name & Description	Remarks
		MECHANISM PARTS LIST	
DECK1			
101	RMD5013ZB	HEAD ANGLE	
102	RUA793ZA	HEAD BASE	
103	SJH103-1	PLAYBACK HEAD	
104	1UB0089ZA	ARM	
104-1	RUW148ZA	SPRING	
105	1DM0005ZA	REEL TABLE (R)	
106	1DM0017ZA	REEL TABLE (F)	
107	RUB502ZC	LEVER	
108	RDG5772ZA	GEAR	
109	RUB508ZA	BRAKE ROD	
110	RUB506ZB	ROCK LEVER	
111	RUG82Z	DAMYE HEAD	
112	1UB0087ZA	ARM	
112-1	RUW140ZB	SPRING	
114	RNL1Z	DAMPER ARM	
115	RUB503ZB	MAIN LEVER	
116	RZUAR300	CHASSIS	
117	RUW142ZA	SPRING	
118	QBA51278	SPRING	
120	RUW139ZA	SPRING	
121	RFM133ZA	DC MOTOR	
122	1UE0015ZA	PLUNGER	
123	RUB428Z	MOVING IRON CORE	
124	RUL1030ZC	ANGLE	
125	RMD5017ZA	ANGLE	
126	RDG5927ZC	MAIN GERA	
127	1DW0037ZA	FLYWHEEL (F)	
127-1	RNW139ZA	WASHER	
128	RHM278ZA	SPACER	
129	1DG0006ZA	REEL TABLE GEAR	
130	RUB513ZC	ARM	
131	1UB0091ZA	LEVER	
131-1	RUW146ZA	SPRING	
132	1DR0011ZA	MAIN PULLEY	
133	RDV90ZB	BELT	
134	RDG5769ZA	REEL TABLE GEAR	
135	RUQ10Z	SPRING	
136	RUW145ZA	SPRING	
137	1UB0090ZA	ROD	
137-1	RUB512ZB	ROD	
138	RDG5773ZA	GEAR	
139	RUQ30Z	SPRING	
140	RUS609Z	TAPE PRESSURE SPRING	
141	RUB514ZB	LEVER	
142	RUW147ZA	SPRING	
144	RUB509ZA	LEVER	
145	RDV109ZA	CAPSTAN BELT	
146	RUB541Z	EJECT ROD (L)	

Ref. No.	Part No.	Part Name & Description	Remarks
148	RUW167ZA	SPRING	
149	RHG3032ZA	RUBBER CUSHION	
150	RNL180ZA	DAMPER ARM	
151	QHQ1361A	SCREW	
152	RHE5201ZA	SCREW	
153	XTN26+7J	SCREW	
154	XTN26+16F	SCREW	
155	XTW2+8S	SCREW	
156	XYC2+JF16	SCREW	
157	XSN26+3	SCREW	
158	XTN2+5F	SCREW	
159	RJS7T7ZA	CONNECTOR (7P), J951	
160	REX0060	LEAD WIRE BLOCK	

■ MECHANICAL PARTS LOCATION

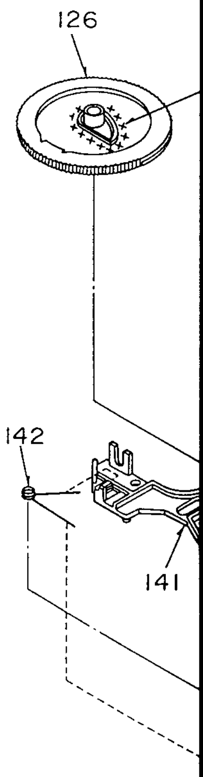
(DECK 1: Front view)



Note:
When changing mechanism parts, apply the specified grease to areas marked "XX" as shown in the drawing.

Ref. No.	Part Name	Part No.
Ⓐ	FLOIL AK-152	SZZOL18
Ⓒ	FLOIL947P	RZZOL02

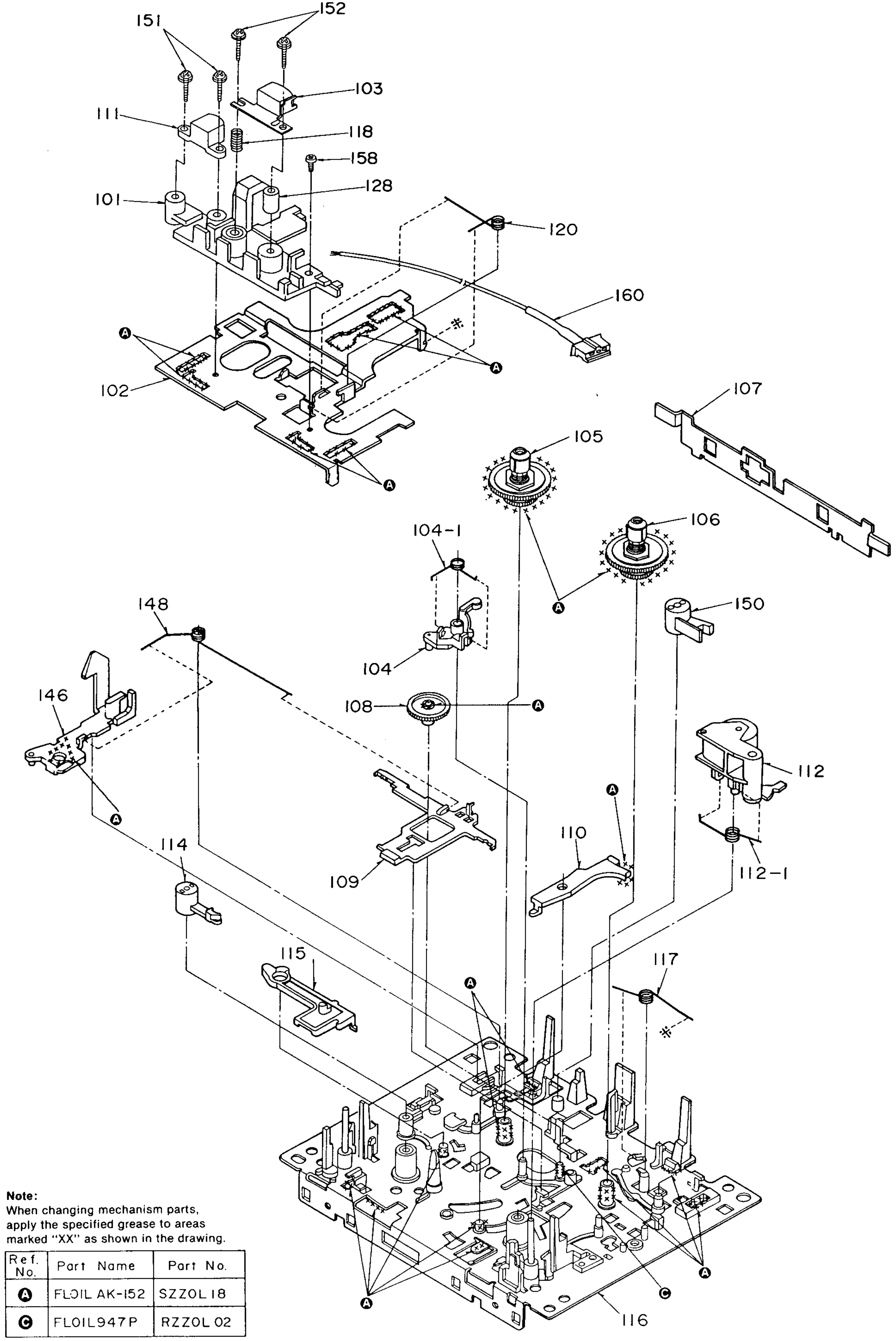
(DECK 1: Rea



ption	Remarks

MECHANICAL PARTS LOCATION

(DECK 1: Front view)


151
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104-1
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112-1
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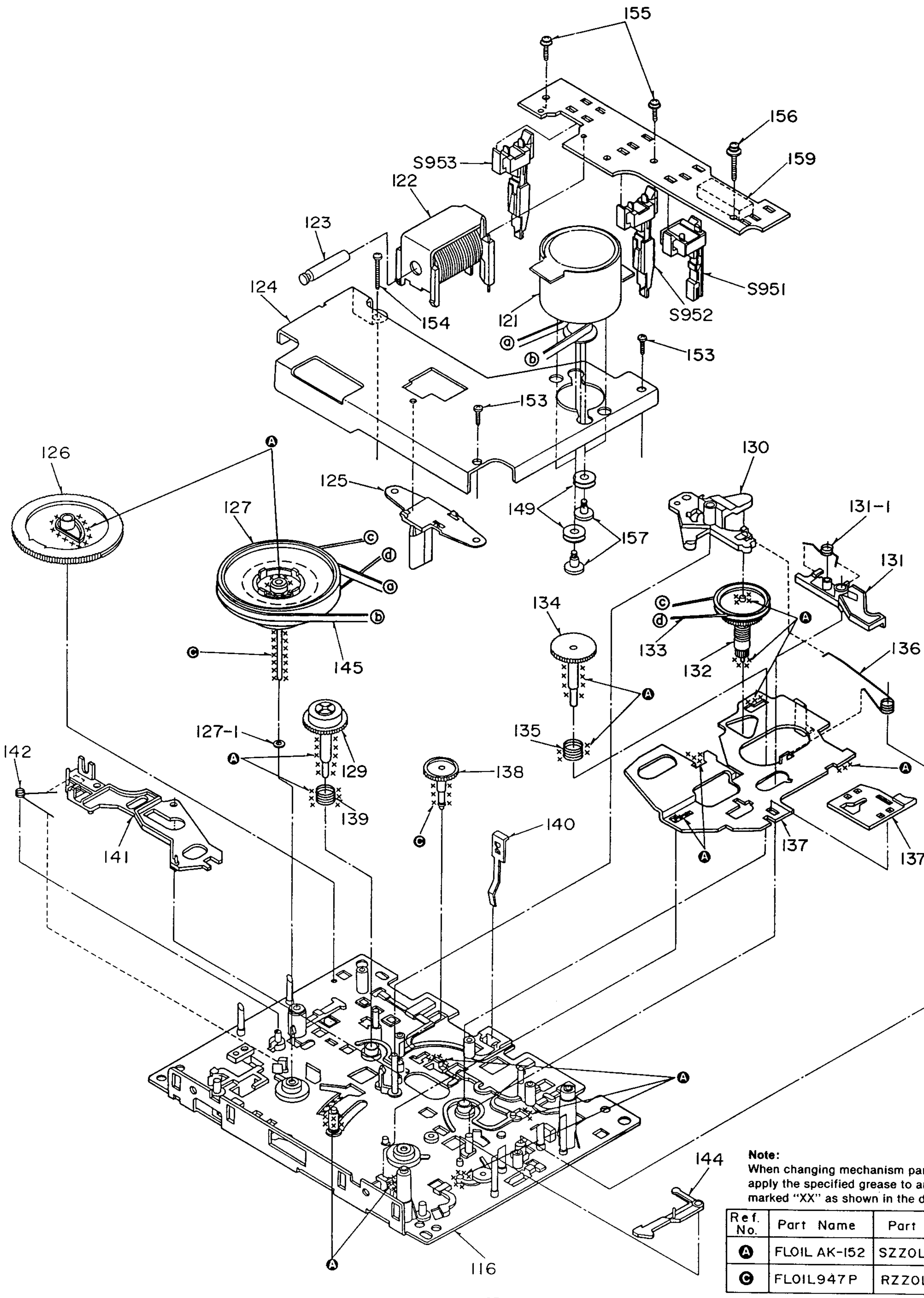
Note:
When changing mechanism parts, apply the specified grease to areas marked "XX" as shown in the drawing.

Ref. No.	Part Name	Part No.
Ⓐ	FLOIL AK-152	SZZ0L18
Ⓒ	FLOIL947P	RZZ0L02

(DECK 1: Rear view)


155
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S953
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S952
S951
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131-1
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127-1
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137-1
144
116

Note:
When changing mechanism parts, apply the specified grease to areas marked "XX" as shown in the drawing.

Ref. No.	Part Name	Part No.
Ⓐ	FLOIL AK-152	SZZ0L18
Ⓒ	FLOIL947P	RZZ0L02

REPLACEMENT PARTS LIST

Notes :
- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety.When replacing any of these components use only manufacturer's specified parts.
- The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
  Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)	
IC1	AN7384-B	ELECTRIC VOLUME	
IC2	AN7351K	PLAYBACK/REC AMP	
IC401	TEA0657	DOLBY NR	
IC501	AN6888	L. E. D. METER DRIVE	
IC901	M50746-166SP	MICROCOMPUTER	
IC951	DN6851A	HALL	
IC971	DN6851A	HALL	
		TRANSISTOR(S)	
Q1-4	2SJ164PQRTA	TRANSISTOR	
Q5-8	2SA1309AQSTA	TRANSISTOR	
Q9-14	2SC3311AQSTA	TRANSISTOR	
Q15, 16	2SD1450RSTTA	TRANSISTOR	
Q17	DTA114ESTP	TRANSISTOR	
Q301, 302	2SC3311AQSTA	TRANSISTOR	
Q303	2SB621ARSTA	TRANSISTOR	
Q304	2SD592QRSTA	TRANSISTOR	
Q401-404	2SC3311AQSTA	TRANSISTOR	
Q405	2SA1309AQSTA	TRANSISTOR	
Q502-506	DTA114ESTP	TRANSISTOR	
Q514	DTA114ESTP	TRANSISTOR	
Q601	2SA1309AQSTA	TRANSISTOR	⚠
Q603	2SC3311AQSTA	TRANSISTOR	⚠
Q604	2SD2037EFTA	TRANSISTOR	
Q605	2SB1357EFTA	TRANSISTOR	
Q606	2SD592QRSTA	TRANSISTOR	
Q901	2SC3311AQSTA	TRANSISTOR	
Q902, 903	DTA114ESTP	TRANSISTOR	
Q904	2SB1030RSTTA	TRANSISTOR	
Q905	2SC3311AQSTA	TRANSISTOR	
Q906	DTC124ESTP	TRANSISTOR	
Q907	2SA1309AQSTA	TRANSISTOR	
Q909	DTA114ESTP	TRANSISTOR	
Q910	DTC114ESTP	TRANSISTOR	
Q911	2SA1309AQSTA	TRANSISTOR	
Q912	2SB621ARSTA	TRANSISTOR	⚠
Q913	DTC114ESTP	TRANSISTOR	
Q914	2SB1030RSTTA	TRANSISTOR	⚠
Q915	DTC114ESTP	TRANSISTOR	
Q916	2SB1030RSTTA	TRANSISTOR	⚠
Q917	DTC114ESTP	TRANSISTOR	
Q918	2SA1309AQSTA	TRANSISTOR	
Q919	DTC114ESTP	TRANSISTOR	
Q920	2SB621ARSTA	TRANSISTOR	⚠
Q921, 922	DTC114ESTP	TRANSISTOR	
Q924-926	DTA114ESTP	TRANSISTOR	
		DIODE(S)	
D1, 2	MA167TA	DIODE	
D401	MA165TA	DIODE	
D501, 502	LN346GP-C	DIODE	
D503	LN846RP-C	DIODE	
D504, 505	LN346GP-C	DIODE	
D511	LN346GP-C	DIODE	
D513, 514	LN346GP-C	DIODE	
D515, 516	MA165TA	DIODE	
D601-606	1SR35200TB	DIODE	⚠
D607, 608	MA4082MTA	DIODE	
D610	MA4062LTA	DIODE	
D612	MA165TA	DIODE	
D901-907	MA165TA	DIODE	
D908	1SR35200TB	DIODE	⚠
D909	MA165TA	DIODE	
D910	MA165TA	DIODE	
D911, 912	MA165TA	DIODE	⚠
D913	MA165TA	DIODE	
D914	MA4051MTA	DIODE	
D915, 916	MA165TA	DIODE	
D921	MA165TA	DIODE	
D951	1SS133	DIODE	
D971	1SS133	DIODE	
		I. C. PROTECTOR(S)	
ICP1	SRUN10T	I. C. PROTECTOR	(EB, GN)
		VARIABLE RESISTOR(S)	
VR1	EVJ02FF01B15	REC. LEVEL CONTROL	
VR3-6	EVNDXAA00B24	PLAYBACK GAIN ADJ.	
VR7, 8	EVNDXAA00B14	OVERALL GAIN ADJ.	
VR301	EVNDXAA00B53	ERASE CURRENT ADJ.	
VR302, 303	EVNDXAA00B15	OVERALL FREQUENCY ADJ.	
VR901-903	EVNDXAA00BS3	TAPE SPEED ADJ.	
		COIL(S)	
L1, 2	SLQX303-1KT	COIL	
L3, 4	SLQX272-1YT	COIL	
L301	SL09B4-K	COIL	
L401, 402	QLM9Z10K	COIL	
		OSCILLATOR(S)	
X901	EF0GC4004T4	CERAMIC FILTER	
		TRANSFORMER(S)	
T601	RTP1K4E003-V	POWER TRANSFORMER	(EG) ⚠
		FUSE(S)	
F601	XBA2C20TB0	FUSE	(EG) ⚠
		SWITCH(ES)	
S701	EVQQB005R	STOP(DECK1)	
S702	EVQQTG05R	F. F. (DECK1)	
S703	EVQQTG05R	REW(DECK1)	
S704	EVQQB005R	PLAYBACK(DECK1)	
S706	SSS180-1	REVERSE MODE	
S708	EVQQTG05R	AUTO REC MUTE	
S711	EVQQTG05R	STOP(DECK2)	
S712	EVQQTG05R	F. F. (DECK2)	
S713	EVQQTG05R	REW(DECK2)	
S714	EVQQTG05R	F. PLAYBACK(DECK2)	
S715	EVQQTG05R	R. PLAYBACK(DECK2)	
S716	EVQQTG05R	REC(DECK2)	
S717	EVQQTG05R	PAUSE(DECK2)	
S718	EVQQTG05R	SYNCHRO START(DECK2)	
S719	EVQQTG05R	TAPE EDIT SPEED(X2)	
S720	EVQQTG05R	TAPE EDIT SPEED(X1)	
S722	EVQQTG05R	DOLBY NR	
S725	RSP2B005-J	POWER	⚠
S951	RSH1A89Z	MODE(DECK1)	
S952	RSH1A90Z	HALF(DECK1)	
S953	RSH1A90Z	ATS(DECK1)	
S971	RSH1A89Z	MODE(DECK2)	
S972	RSH1A90Z	HALF(DECK2)	
S973	RSH1A90Z	R. REC INH. (DECK2)	
S974	RSH1A90Z	F. REC INH. (DECK2)	
S975	RSH1A90Z	ATS(DECK2)	
S976	RSH1A90Z	ATS(DECK2)	
		L. E. D. BLOCK	
AZ501	LN078479P	L. E. D. BLOCK UNIT	(D509, 510, 520, 522, 524, 526, 528)
		CONNECTOR(S) AND SOCKET(S)	
CN3	SJSD1005	CONNECTOR(10P)	
CN4	RJS1A1704	CONNECTOR(4P)	
CN5	SJSD0705	CONNECTOR(7P)	
CN6	RJS1A1704	CONNECTOR(4P)	
CN7	SJSD0705	CONNECTOR(7P)	
CN8A	RJS1A1703	CONNECTOR(3P)	
CN8B	RJS1A1703	CONNECTOR(3P)	
CN9A	RJS1A1704	CONNECTOR(4P)	
CN9B	RJS1A1704	CONNECTOR(4P)	
CN10	SJSD0705	CONNECTOR(7P)	
CN601	RJS1A1101	SOCKET(1P)	(EG)
CN603	RJS1A1101	SOCKET(1P)	(EG)
CN606-608	RJS1A1101	SOCKET(1P)	(EG)
CN612, 613	EYF52BC	FUSE HOLDER	(EG)
CP1	SJTD313	CONNECTOR(3P)	
CP2	SJTD513	CONNECTOR(5P)	
		GND PART(S)	
E1	SNE1004-1	GND PLATE	
		JACK(S)	
JK1	SJF3069N	TERMINAL BOARD	
JK3	RJJ33T01	M3 JACK(BLACK)	
JK4, 5	RJJ33TR01	M3 JACK(RED)	
JK6	SJS9236	AC INLET	(EG) ⚠
JK8	RJS1A0203-0	SOCKET(3P) TO AMPLIFIER	(E, EB, GC, GN) ⚠

RESISTORS

Notes : * Capacity
* Resistance

Ref. No.	Part No.
R1, 2	ERDS2TJ394T
R3, 4	ERDS2TJ393T
R5, 6	ERDS2TJ183T
R7, 8	ERDS2TJ225T
R9, 10	ERDS2TJ102T
R11, 12	ERDS2TJ561T
R13, 14	ERDS2TJ332T
R19, 20	ERDS2TJ101T
R21, 22	ERDS2TJ104T
R23, 24	ERDS2TJ101T
R25, 26	ERDS2TJ225T
R27, 28	ERDS2TJ820T
R29, 30	ERDS2TJ103T
R31, 32	ERDS2TJ273T
R33, 34	ERDS2TJ183T
R35, 36	ERDS2TJ474T
R37, 38	ERDS2TJ182T
R43, 44	ERDS2TJ103T
R45, 46	ERDS2TJ223T
R47, 48	ERDS2TJ472T
R49, 50	ERDS2TJ102T
R51, 52	ERDS2TJ330T
R53-56	ERDS2TJ272T
R57, 58	ERDS2TJ223T
R59, 60	ERDS2TJ272T
R65	ERDS2TJ332T
R66	ERDS2TJ682T
R67	ERDS2TJ223T
R69, 70	ERDS2TJ153T
R71, 72	ERDS2TJ432
R301	ERDS2TJ1R0T
R302, 303	ERDS2TJ183T
R304, 305	ERDS2TJ100T
R306	ERDS2TJ182T
R308	ERDS2TJ561T
R403, 404	ERDS2TJ103T
R405, 406	ERDS2TJ183T
R407, 408	ERDS2TJ242T
R409-412	ERDS2TJ684T
R413, 414	ERDS2TJ562T
R415, 416	ERDS2TJ473T
R417, 418	ERDS2TJ332T
R419, 420	ERDS2TJ102T
R421, 422	ERDS2TJ274T
R423, 424	ERDS2TJ184T
R425	ERDS2TJ103T

ng any of these

for area.)

n	Remarks
	⚠
	⚠
	⚠
	⚠
	(EB, GN)

Ref. No.	Part No.	Part Name & Description	Remarks
L301	SL09B4-K	COIL	
L401, 402	QLM9Z10K	COIL	
		OSCILLATOR(S)	
X901	EFOGC4004T4	CERAMIC FILTER	
		TRANSFORMER(S)	
T601	RTP1K4E003-V	POWER TRANSFORMER	(EG) ⚠
		FUSE(S)	
F601	XBA2C20TB0	FUSE	(EG) ⚠
		SWITCH(ES)	
S701	EVQQB005R	STOP(DECK1)	
S702	EVQQTG05R	F. F. (DECK1)	
S703	EVQQTG05R	REW(DECK1)	
S704	EVQQB005R	PLAYBACK(DECK1)	
S706	SSS180-1	REVERSE MODE	
S708	EVQQTG05R	AUTO REC MUTE	
S711	EVQQTG05R	STOP(DECK2)	
S712	EVQQTG05R	F. F. (DECK2)	
S713	EVQQTG05R	REW(DECK2)	
S714	EVQQTG05R	F. PLAYBACK(DECK2)	
S715	EVQQTG05R	R. PLAYBACK(DECK2)	
S716	EVQQTG05R	REC(DECK2)	
S717	EVQQTG05R	PAUSE(DECK2)	
S718	EVQQTG05R	SYNCHRO START(DECK2)	
S719	EVQQTG05R	TAPE EDIT SPEED(X2)	
S720	EVQQTG05R	TAPE EDIT SPEED(X1)	
S722	EVQQTG05R	DOLBY NR	
S725	RSP2B005-J	POWER	⚠
S951	RSH1A89Z	MODE(DECK1)	
S952	RSH1A90Z	HALF(DECK1)	
S953	RSH1A90Z	ATS(DECK1)	
S971	RSH1A89Z	MODE(DECK2)	
S972	RSH1A90Z	HALF(DECK2)	
S973	RSH1A90Z	R. REC INH. (DECK2)	
S974	RSH1A90Z	F. REC INH. (DECK2)	
S975	RSH1A90Z	ATS(DECK2)	
S976	RSH1A90Z	ATS(DECK2)	
		L. E. D. BLOCK	
AZ501	LN078479P	L. E. D. BLOCK UNIT	(D509, 510, 520, 522,
			524, 526, 528)
		CONNECTOR(S) AND SOCKET(S)	

Ref. No.	Part No.	Part Name & Description	Remarks
CN3	SJSD1005	CONNECTOR(10P)	
CN4	RJS1A1704	CONNECTOR(4P)	
CN5	SJSD0705	CONNECTOR(7P)	
CN6	RJS1A1704	CONNECTOR(4P)	
CN7	SJSD0705	CONNECTOR(7P)	
CN8A	RJS1A1703	CONNECTOR(3P)	
CN8B	RJS1A1703	CONNECTOR(3P)	
CN9A	RJS1A1704	CONNECTOR(4P)	
CN9B	RJS1A1704	CONNECTOR(4P)	
CN10	SJSD0705	CONNECTOR(7P)	
CN601	RJS1A1101	SOCKET(1P)	(EG)
CN603	RJS1A1101	SOCKET(1P)	(EG)
CN606-608	RJS1A1101	SOCKET(1P)	(EG)
CN612, 613	EYF52BC	FUSE HOLDER	(EG)
CP1	SJTD313	CONNECTOR(3P)	
CP2	SJTD513	CONNECTOR(5P)	
		GND PART(S)	
E1	SNE1004-1	GND PLATE	
		JACK(S)	
JK1	SJF3069N	TERMINAL BOARD	
JK3	RJJ33T01	M3 JACK(BLACK)	
JK4, 5	RJJ33TR01	M3 JACK(RED)	
JK6	SJS9236	AC INLET	(EG) ⚠
JK8	RJS1A0203-0	SOCKET(3P) TO AMPLIFIER	(E, EB, GC, GN) ⚠

RESISTORS & CAPACITORS

Notes : * Capacity valuse are in microfarads (uF) unless specified otherwise, P=Pico-farads(pF) F=Farads(F)
* Resistance values are in ohms, unless specified otherwise, 1K=1,000(OHM) , 1M=1,000k(OHM)

Ref. No.	Part No.	Values & Remarks
		RESISTORS
R1, 2	ERDS2TJ394T	1/4W 390K
R3, 4	ERDS2TJ393T	1/4W 39K
R5, 6	ERDS2TJ183T	1/4W 18K
R7, 8	ERDS2TJ225T	1/4W 2.2M
R9, 10	ERDS2TJ102T	1/4W 1K
R11, 12	ERDS2TJ561T	1/4W 560
R13, 14	ERDS2TJ332T	1/4W 3.3K
R19, 20	ERDS2TJ101T	1/4W 100
R21, 22	ERDS2TJ104T	1/4W 100K
R23, 24	ERDS2TJ101T	1/4W 100
R25, 26	ERDS2TJ225T	1/4W 2.2M
R27, 28	ERDS2TJ820T	1/4W 82
R29, 30	ERDS2TJ103T	1/4W 10K
R31, 32	ERDS2TJ273T	1/4W 27K
R33, 34	ERDS2TJ183T	1/4W 18K
R35, 36	ERDS2TJ474T	1/4W 470K
R37, 38	ERDS2TJ182T	1/4W 1.8K
R43, 44	ERDS2TJ103T	1/4W 10K
R45, 46	ERDS2TJ223T	1/4W 22K
R47, 48	ERDS2TJ472T	1/4W 4.7K
R49, 50	ERDS2TJ102T	1/4W 1K
R51, 52	ERDS2TJ330T	1/4W 33
R53-56	ERDS2TJ272T	1/4W 2.7K
R57, 58	ERDS2TJ223T	1/4W 22K
R59, 60	ERDS2TJ272T	1/4W 2.7K
R65	ERDS2TJ332T	1/4W 3.3K
R66	ERDS2TJ682T	1/4W 6.8K
R67	ERDS2TJ223T	1/4W 22K
R69, 70	ERDS2TJ153T	1/4W 15K
R71, 72	ERDS2TJ432	1/4W 4.3K
R301	ERDS2TJ1R0T	1/4W 1.0
R302, 303	ERDS2TJ183T	1/4W 18K
R304, 305	ERDS2TJ100T	1/4W 10
R306	ERDS2TJ182T	1/4W 1.8K
R308	ERDS2TJ561T	1/4W 560
R403, 404	ERDS2TJ103T	1/4W 10K
R405, 406	ERDS2TJ183T	1/4W 18K
R407, 408	ERDS2TJ242T	1/4W 2.4K
R409-412	ERDS2TJ684T	1/4W 680K
R413, 414	ERDS2TJ562T	1/4W 5.6K
R415, 416	ERDS2TJ473T	1/4W 47K
R417, 418	ERDS2TJ332T	1/4W 3.3K
R419, 420	ERDS2TJ102T	1/4W 1K
R421, 422	ERDS2TJ274T	1/4W 270K
R423, 424	ERDS2TJ184T	1/4W 180K
R425	ERDS2TJ103T	1/4W 10K

Ref. No.	Part No.	Values & Remarks
R501	ERDS2TJ104T	1/4W 100K
R503	ERDS2TJ562T	1/4W 5.6K
R504	ERDS2TJ560T	1/4W 56 ⚠
R506-510	ERDS2TJ391T	1/4W 390
R514-516	ERDS2TJ391T	1/4W 390
R518	ERDS2TJ391T	1/4W 390
R519	ERDS2TJ331T	1/4W 330
R601	ERDS2TJ472T	1/4W 4.7K ⚠
R602	ERDS2TJ472T	1/4W 4.7K
R603	ERDS2TJ103T	1/4W 10K
R604	ERDS2TJ472T	1/4W 4.7K ⚠
R605	ERDS1FVJ100T	1/2W 10 (E, EG,
		GC) ⚠
R605	ERD2FCVG100T	1/4W 10 (EB, GN) ⚠
R606	ERDS1FVJ3R3T	1/2W 3.3 ⚠
R607	ERDS2TJ391T	1/4W 390
R608	ERDS2TJ221T	1/4W 220
R609, 610	ERDS2TJ222T	1/4W 2.2K
R612	ERDS1FVJ100T	1/2W 10 (E, EG,
		GC) ⚠
R612	ERD2FCVG100T	1/4W 10 (EB, GN) ⚠
R614	ERDS2TJ102T	1/4W 1K ⚠
R615, 616	ERDS2TJ680T	1/4W 68
R617, 618	ERQ16NKR15E	1W 0.15 (E, EB,
		EB, GC) ⚠
R619-621	ERDS2TJ560	1/4W 56 (EB, GN)
R701	ERDS2TJ821T	1/4W 820
R702	ERDS2TJ102T	1/4W 1K
R703	ERDS2TJ122T	1/4W 1.2K
R704	ERDS2TJ152T	1/4W 1.5K
R705	ERDS2TJ182T	1/4W 1.8K
R706	ERDS2TJ153T	1/4W 15K
R707, 708	ERDS2TJ102T	1/4W 1K
R710	ERDS2TJ123T	1/4W 12K
R711	ERDS2TJ223T	1/4W 22K
R712	ERDS2TJ683T	1/4W 68K
R713	ERDS2TJ821T	1/4W 820
R714	ERDS2TJ102T	1/4W 1K
R715	ERDS2TJ122T	1/4W 1.2K
R716	ERDS2TJ152T	1/4W 1.5K
R717	ERDS2TJ182T	1/4W 1.8K
R718	ERDS2TJ222T	1/4W 2.2K
R719	ERDS2TJ332T	1/4W 3.3K
R720	ERDS2TJ472T	1/4W 4.7K
R721	ERDS2TJ682T	1/4W 6.8K
R722	ERDS2TJ123T	1/4W 12K
R723	ERDS2TJ223T	1/4W 22K
R901, 902	ERDS2TJ473T	1/4W 47K
R903	ERDS2TJ223T	1/4W 22K

Ref. No.	Part No.	Values & Remarks
R904	ERDS2TJ152T	1/4W 1.5K
R905	ERDS2TJ222T	1/4W 2.2K
R906	ERDS2TJ103T	1/4W 10K
R907	ERDS2TJ563T	1/4W 56K
R908-910	ERDS2TJ103T	1/4W 10K
R911	ERDS2TJ392T	1/4W 3.9K
R912	ERDS2TJ222T	1/4W 2.2K
R913	ERDS2TJ271T	1/4W 270
R914	ERDS2TJ681T	1/4W 680
R915	ERDS2TJ683T	1/4W 68K
R916	ERDS2TJ472T	1/4W 4.7K
R917, 918	ERDS2TJ103T	1/4W 10K
R919	ERDS2TJ471T	1/4W 470
R920-922	ERDS2TJ103T	1/4W 10K
R923	ERDS2TJ102T	1/4W 1K
R924	ERDS2TJ103T	1/4W 10K
R925	ERDS2TJ273T	1/4W 27K
R926	ERDS2TJ102T	1/4W 1K
R927	ERDS2TJ223T	1/4W 22K
R928	ERDS2TJ562T	1/4W 5.6K
R929	ERDS2TJ272T	1/4W 2.7K
R930, 931	ERDS2TJ472T	1/4W 4.7K
R932	ERDS2TJ392T	1/4W 3.9K
R933	ERDS2TJ472T	1/4W 4.7K
R934	ERDS2TJ105T	1/4W 1M
R935	ERDS2TJ182T	1/4W 1.8K
R936	ERDS2TJ103T	1/4W 10K
R937	ERDS2TJ472T	1/4W 4.7K
R938, 939	ERDS2TJ103T	1/4W 10K
R940-942	ERDS2TJ472T	1/4W 4.7K
R943	ERDS2TJ272T	1/4W 2.7K
R946, 947	ERDS2TJ102T	1/4W 1K
R948	ERDS2TJ184T	1/4W 180K
R949	ERDS2TJ103T	1/4W 10K
R950	ERDS2TJ332T	1/4W 3.3K
R951	ERDS2TJ103T	1/4W 10K
R952	ERDS2TJ432	1/4W 4.3K
R953	ERDS2TJ103T	1/4W 10K
R954	ERDS2TJ223T	1/4W 22K ⚠
R955	ERDS2TJ821T	1/4W 820
R956	ERDS2TJ223T	1/4W 22K ⚠
R957	ERDS2TJ821T	1/4W 820
R958	ERDS2TJ223T	1/4W 22K ⚠
R959	ERDS2TJ821T	1/4W 820
R960	ERDS2TJ153T	1/4W 15K
R961	ERDS2TJ561T	1/4W 560
R962	ERDS2TJ103T	1/4W 10K
R963	ERDS2TJ432	1/4W 4.3K
R964	ERDS2TJ184T	1/4W 180K

Ref. No.	Part No.	Values & Remarks
R965	ERDS2TJ103T	1/4W 10K
R966	ERDS2TJ223T	1/4W 22K ⚠
R967	ERDS2TJ821T	1/4W 820
R968, 969	ERDS2TJ472T	1/4W 4.7K
		CAPACITORS
C1-3	ECEA1HK010B	50V 1U
C5, 6	ECEA1CK220B	16V 22U
C7-10	ECBT1H561KB5	50V 560P
C11, 12	ECBT1H102KB5	50V 1000P
C13, 14	ECEA0JU101B	6.3V 100U
C15, 16	ECQB1H682JZ3	50V 6800P
C17-20	ECEA1EK4R7B	25V 4.7U
C21	ECEA0JU101B	6.3V 100U
C23-26	ECEA1HK010B	50V 1U
C27, 28	ECBT1H561KB5	50V 560P
C29, 30	ECKD2H101KB	500V 100P
C31, 32	ECCD1H181KB	50V 180P
C33, 34	ECEA1HKR47B	50V 0.47U
C35, 36	ECFR1C392JR	16V 3900P
C37, 38	ECFR1C183JR	16V 0.018U
C39, 40	ECFR1C822JR	16V 8200P
C41, 42	ECFR1C273JR	16V 0.027U
C45, 46	ECKR1H103ZF5	50V 0.01U
C49, 50	ECEA1CK100B	16V 10U
C53, 54	ECFR1C183JR	16V 0.018U
C55	ECBT1H102KB5	50V 1000P
C57, 58	ECEA1CU470B	16V 47U
C301	ECQP1153JZ	50V 0.015U
C302	ECEA1CU221B	16V 220U
C303	ECKR1H392KB5	50V 3900P
C304, 305	ECFR1E222KAY	25V 2200P
C306	ECFR1E682KAY	25V 6800P
C307, 308	ECCD1H221KB	50V 220P
C309	ECKR1H103ZF5	50V 0.01U
C401, 402	ECEA1HK2R2B	50V 2.2U
C403, 404	ECEA1EK4R7B	25V 4.7U
C405, 406	ECKD1H122KB	50V 1200P
C407, 408	ECKD1H152KB	50V 1500P
C409, 410	ECFR1C472JR	16V 4700P
C411, 412	ECQB1H333JZ3	50V 0.033U
C413, 414	ECFR1C473JR	16V 0.047U
C415, 416	ECEA1HKR33B	50V 0.33U
C417, 418	ECFR1C104JR	16V 0.1U
C501	ECEA1HK2R2B	50V 2.2U
C503	ECBT1E103ZF5	25V 0.01U ⚠
C601	ECKD2H682PE	500V 6800P
C602, 603	ECEA1EU102B	25V 1000U ⚠
C604, 605	ECKR1H103ZF5	50V 0.01U
C606, 607	ECEA1AU221B	10V 220U
C608	ECKR1H103ZF5	50V 0.01U
C610, 611	ECEA0JU221B	6.3V 220U
C612	ECEA1EU222E	25V 2200U ⚠
C901	ECEA0JU222B	6.3V 2200U
C903	ECEA1HK010B	50V 1U
C904	ECEA1EK4R7B	25V 4.7U
C907	ECKR1H103ZF5	50V 0.01U
C909	ECKR1H103ZF5	50V 0.01U

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